



 **PREMIER**
LAB SUPPLY

XRF Sample Preparation Specialists



Contact Information

PREMIER Lab Supply business hours are:
Monday - Friday 8:30 a.m. - 6:00 p.m. EST

MAIL ADDRESS:
PREMIER Lab Supply, Inc.
691 NW Enterprise Drive
PORT ST. LUCIE, FL 34986

PHONE: 772.873.1700
FAX: 772.873.1800

E-MAIL: info@premierlabsupply.com
www.premierlabsupply.com

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Product Terms, Conditions & Warranty

General Terms & Conditions of Sale

General

These General Terms and Conditions of Sale (the "Terms") apply to the sale of all products and rendition of all services (collectively "Products") sold by Premier Lab Supply Inc. ("Seller") to the party purchasing such Products ("Buyer"). All quotations issued by Seller and all orders placed by Buyer are subject only to these Terms, to the exclusion of any other terms, whether in verbal, written or other form.

Offers/Orders

All offers made in any form remain non-obligatory. No contract for the sale of Products shall be binding on Seller until confirmed in writing to Buyer, and any order of Buyer shall only become binding on Seller once confirmed in writing by Seller. In no event will verbal promises or arrangements made by or with Seller's personnel bind Seller unless confirmed in writing by Seller.

Prices

The sales price of Products is based on prices which apply at the time at which the order is accepted by Seller for immediate delivery. Unless otherwise agreed in writing between Seller and Buyer, the sales price is calculated based on delivery to Buyer's premises, and shall be calculated and paid in US Dollars. Any additional administrative costs such as, by way of example, obtaining certificates of origin, satisfying customs or duties obligations or similar documents/obligations, are at Buyer's risk of satisfaction and at Buyer's expense.

Catalogs

The illustrations and drawings of Products which may appear in Seller's catalogs or website are solely intended to provide a general impression of the Product. Seller accepts no liability for any damage whatsoever arising out of any differences between data of product supplied and any illustrations and drawings of Products. Product suitability for a particular application (machine and/or material uses) are the responsibility and risk of the Buyer. Descriptions and suitable applications are to the best of Seller's knowledge and ability at the time of initial publication and Buyer is cautioned that manufacturers may amend the specifications of products without notice.

Delivery & Delivery Times

Unless otherwise agreed in writing by Seller, delivery of Products is FOB Seller's place of business in St. Lucie County, Florida. Delivery dates designated by Seller are estimated dates only, and are based on the working circumstances prevailing at the time the order is approved by Seller. Seller assumes no liability for late delivery. Seller reserves the right to extend the delivery date due to changes in work circumstances, or if Buyer fails to perform any act that it has undertaken to perform or omits to perform any such act, in which case Seller will advise Buyer accordingly.

Fitting/Installation/Integration

Buyer is solely responsible for the correct and safe application and use of Products purchased. In no event will Seller be held responsible or liable for any incorrect or unsafe applications or uses of the Products, including without limitation applications and uses that do not conform to all applicable instructions, laws, codes and best practice, nor for any tampering with the Products, Product label or documentation, and/or misuse of the Products. Buyer shall only purchase such products as Buyer or its agents are trained in the proper handling and application. Assuring product suitability and manner of product use is the sole responsibility and risk of the Buyer.

Products such as sample cups and thin film may be machine-specific and/or material specific and Buyer acknowledges, by ordering such Products, that Buyer is adequately informed and trained in the proper handling, application and use of such Products. Seller shall not be liable for particular results or test readings that may be obtained by use of the Products, and all such liability and responsibility arising out of the publication of any results or tests shall be assumed by Buyer and/or Buyer's agents.

Seller is not responsible for any aspects of integration of Seller Products into and with other products, including additional Seller Products. Seller's Products conform to its published specifications as tested and recorded in the conditions specified on such products' published data sheet, if any, and not integrated with additional products, or in and with atypical mechanical or chemical environments or conditions.

Product Warranty

Warranty terms and conditions for all Products are set out in a separate document "Warranty Terms and Conditions", which document is hereby referenced and incorporated in these Terms.

Payments

Seller will specify payment terms and conditions in Seller's offers and/or invoices. Buyer shall pay all invoices in a timely manner as and when due. If payment is not made when due, Seller shall have the right to impose statutory interest on any unpaid balance. No payment due by Buyer may be postponed without the prior written agreement of Seller.

If Buyer is in arrears with payment of any amount due, Seller shall be entitled to cancel or postpone delivery of Products ordered at its sole discretion. In the event that Buyer enters dissolution or bankruptcy proceedings (whether voluntary or involuntary), or if liquidation proceedings are commenced against Buyer, all amounts due by Buyer to Seller shall immediately become due and Seller may elect to cancel any outstanding orders.

Risk

Risk of loss of or damage to Products shall transfer to Buyer upon delivery as per the above terms.

Product Terms, Conditions & Warranty

Cancellations and Product Returns

Unless otherwise agreed in writing between Seller and Buyer, Buyer shall not be entitled to cancel orders for Products that have been accepted by Seller in writing or verbally. Postponement of orders by Buyer shall only be allowed with the prior written approval of Seller. For Product return information for Products under warranty, please see the warranty terms and conditions.

Liability

Except as otherwise mandated by applicable law, Seller's liability for damages and losses of any nature whatsoever is strictly limited to the amount actually received by Seller from Buyer for the specific Product delivered which Product has failed in breach of Warranty Terms and Conditions. In no event will Seller be liable for any indirect or consequential damages, or for any costs, losses or damages which may be incurred by Buyer or by any third party in connection with the replacement of faulty Products, all as detailed in the Warranty Terms and Conditions.

Force Majeure

Seller shall not be liable for any delays or other inability to meet its obligations under any purchase order as a result of circumstances beyond its reasonable control ("Force Majeure"). During the period of Force Majeure, Seller has the right to either continue to perform or dissolve the affected order in whole or in part.

Disputes

All disputes which arise between Seller and Buyer in connection with any offer or order that cannot be amicably resolved, shall be subject to the sole and exclusive jurisdiction of the Florida state courts with venue fixed in Martin or St. Lucie counties or the Federal District Court for the Southern District of Florida. The prevailing party in any dispute resolution proceeding, whether by arbitration, court or otherwise, shall be entitled to attorneys fees and costs of such action.

Miscellaneous

If any provision of these Terms is found by any court or arbitrator to be invalid, illegal or unenforceable, the remainder shall not be affected. Buyer may not assign or transfer these Terms or any rights or obligations hereunder (including pursuant to any purchase order) without Seller's prior written consent, which may be withheld at Seller's sole discretion.

Warranty

Warranty Terms & Conditions

Premier Lab Supply Inc., ("Premier") warrants that Premier's sample cups, thin film and other related sample preparation consumables will be free from defects in materials or workmanship for a period of 30 days. Our sample preparation equipment will be free from defects in materials or workmanship for a period of one (1) year. This warranty period shall commence on the date of shipment of the relevant products from Premier. The Warranty shall only be extended to the original purchaser of the products and/or to the first purchaser who is the end user of the products. Premier is not responsible for any auxiliary equipment or third party products not supplied by Premier.

Exclusions

This Warranty shall not apply to any damages caused as a result of force majeure, misuse or improper use of the products, faulty installation, or negligence by any party other than Premier. In addition, this Warranty is not applicable to any Premier product improperly shipped, stored, installed, operated, and used, including, inter alia, shipping, storage, installation, operation and use otherwise than in accordance with Premier's specifications, including instructions and guidelines for supported use. Buyer contracts that as a condition for any claim for Warranty, whether by this Agreement or pursuant to law, Buyer shall retain the subject hardware and/or consumables and make same available for inspection and analysis upon written notice to Seller of such Warranty claim.

Disclaimer and Limitation

Except as stated herein, Premier disclaims all other warranties and conditions, whether express, implied or statutory, including merchantability and fitness for a particular purpose, with respect to the foregoing products to the maximum extent permitted by applicable law. In no event will Premier be liable to you or any third party for any indirect, consequential, special, punitive or exemplary damages, including, without limitation, damages for loss of business, loss of profits, loss of data, business interruption or damages of associated equipment, loss of use of the Premier product(s) and associated equipment, cost of substitute products, costs of removal, installation, reinstallation, testing and evaluation or shipping arising out of the use, failure of, or inability to use the products, even if Premier has been advised of the possibility of such damages. Premier's liability with respect to any claim of any kind for loss or damages arising out of or related to a breach of Warranty for a product shall in no event exceed the actual purchase price of the specific product giving rise to the claim. Warranty on hardware shall extend solely to the cost of replacement parts and, when necessary, the cost of a qualified technician installation. All other related expenses, including but not limited to costs and expenses associated with technician travel for onsite repairs will be borne by the customer.

To Obtain Warranty Service

In the event that any of the warranted products fail to comply with the Warranty during the applicable Warranty period, please contact Premier to report the non-compliance and verify Warranty coverage. Any claim for warranty under this Agreement shall require Buyer to deliver written notice to Seller within thirty (30) days of the incident giving rise to such warranty claim; such notice containing the date of the event, a description of the event, a description of the product(s) claimed under warranty, and a description of the nature of all damages in such detail as to enable a fixed dollar amount to be ascribed to such damages. Premier may, in its sole discretion, repair or replace products determined to be eligible for Warranty coverage, or may issue a credit for the purchase of replacement products.

Introduction

Profile & Mission

PREMIER Lab Supply, Inc. is a Florida based manufacturer and supplier specializing in XRF Sample Preparation Equipment, Accessories and Platinum Labware items. Since our inception, PREMIER has committed to a primary market focus of XRF Sample Preparation with innovative products, reliable services and the continuous training and support of equipment it markets. Our steady growth and success is directly attributed to our philosophy and commitment to value for our clients. With that in mind, our mission remains the same. It is simply to provide “The Best Prices in the Industry for XRF Sample Preparation Products, Accessories & Services without ever compromising Quality”.

Products and Services

PREMIER is the exclusive authorized US sales and service provider of PHOENIX and xrFUSE6 fusion machines offering our clients a choice of traditional high energy gas or electric technology. Our latest catalog comprises new products and extended services that have been added complementing those that we have been providing over the years. Our new electric fusion machine xrFUSE6, CEMBLEST[™], Petrochemical Glassware, AA sample vials, and ICP sample tubes just to name a few, are some of the new products now offered. Further, our XRF Sample Cups, Thin Films, Aluminum cups, Binders, Fluxes and Platinum Labware have also been broadened.

Our company staff is experienced and knowledgeable with product technical data, service and application support for clients eager to develop sample preparation methods by fusions or press pellets. We continue to offer a comprehensive product range of Platinum labware which includes Beakers, Electrodes, Evaporating Dishes and Crucibles in various shapes, weights and dimensions. Our Fusion Labware range has also grown to include crucibles and moulds suitable for AFT Phoenix, Claisse®, HD Elektronik®, Fusomatic 15, Herzog, Katanax® Leco®, PANalytical®'s Perl'x and Eagon 2.

Satisfaction and Results

Our company's commitment to clients extends well beyond the initial supply of our products as we can offer complete services which include metal exchange, refining, sample preparation, equipment service and technical support. Regardless of your applications, your data can be useless if your sample is not representative, or is poorly prepared. PREMIER offers products and services that can help you achieve accurate and analytical results. If you require XRF sample preparation, or utilize precious metals in your laboratory, then we invite you to explore our company. Most products listed in this catalog are stocked for same day shipment. Custom orders including platinum labware are generally shipped within 30 days or less. We encourage you to visit our web site at www.premierlabsupply.com. Please contact us for the most recent additions to our product line should you not find a product you require in our catalog. We appreciate your business.

PREMIER Lab Supply, Inc
Port St. Lucie, FL

Note: This catalog provides a comprehensive guide to the products and services available from Premier and their use in the laboratory. Most of the items listed are available from stock. Some Platinum products are available from stock and we will be pleased to provide price and delivery information on any item. We also readily quote for nonstandard items, providing assistance with design where required.

XRF Sample Cups

X-ray fluorescence (XRF) is a powerful non-destructive analytical instrumental method used in a wide variety of industries to determine the elemental composition of various materials. These modern XRF instruments are capable of analyzing liquids, loose powders, solids for both major and trace (ppm-level) components.

The diversity of samples presented for XRF analysis is vast in nature. Accurate analytical results for liquid samples prescribe to a fundamental practice by which errors can be avoided. The coupling distance from the plane of the x-ray tube to the surface of the liquid being analyzed must remain constant during analysis or consequently, random errors will occur. With this in mind, the distance may also change if the liquid expands or contracts during analysis whenever proper ventable measures are not taken or cease to exist.

Liquid sample analysis is rapid and can range from water to oil and virtually most require minimal sample preparation. Samples of these types of liquids are simply loaded into a standard PREMIER cup and attached with a thin film sample support material. Rings and/or Sleeves are applied over the cup body to secure and complete the sample preparation cup assembly.

PREMIER XRF sample cups are primarily designed for liquid samples that include applications used to determine sulfur in petroleum products and residual catalysts, monitor additives in lubricating oils, analyze regular wear metal in lubricants and analyze wear debris. These types of samples require special consideration and the venting of vapors or pressure equalization is essential.

Microporous Teflon® or Polypropylene membrane sheets may also be utilized and attached with double-open ended XRF Cups to establish and maintain pressure equalization within the XRF Sample Cup through its gas permeable membrane characteristics. Samples in vacuum, including slurries and generally all samples in air or helium should also be prepared in a similar manner.

Many homogenous powder and solid samples may also be prepared in our cups for use with an X-Ray Instrument. In practice, some materials may be sufficiently soft and homogenous to allow for direct analyzing, but the fundamental limitations on sample size and state are those based on instrumental configuration and sensitivity to sample materials. Some of these samples, including but not limited to are fibers, paint chips, pastes, metal particles and wood shavings.

PREMIER offers a comprehensive selection of XRF Sample Cups that are manufactured "In-House" to fit virtually any XRF Instrument. Users can choose from our distinct series cups including our new pre-assembled CEMBLEST™.

PREMIER makes every effort to ensure that its XRF sample cups, X-ray thin films and any other liquid product consumables are free from defects in materials or workmanship; however leakage of X-ray cups, thin films, and microporous sheets is a potentiality. To avoid potential sample contamination and analytical instrumentation damage including potential injury to the user, PREMIER strongly recommends each XRF Sample cup, X-ray thin film and microporous sheet be checked for leakage prior to insertion in any analytical Instrument. The exercise of safe handling practices to protect the user and the instrumentation always remains with, and is the sole responsibility of, the user. PLS assumes no liability or guarantee that this product will flawlessly perform in accordance with its suggested use.



SC-3332
SC-3335
SC-3340
SC-3340T
SC-3345

Double Open Ended Cups with Lids

Features at a Glance:

- Elongated Sleeves
- Bi-directional Design
- Pre-vented Lids
- Pre-Assembled Cembles™



3000 E Profile XRF Sample Cups

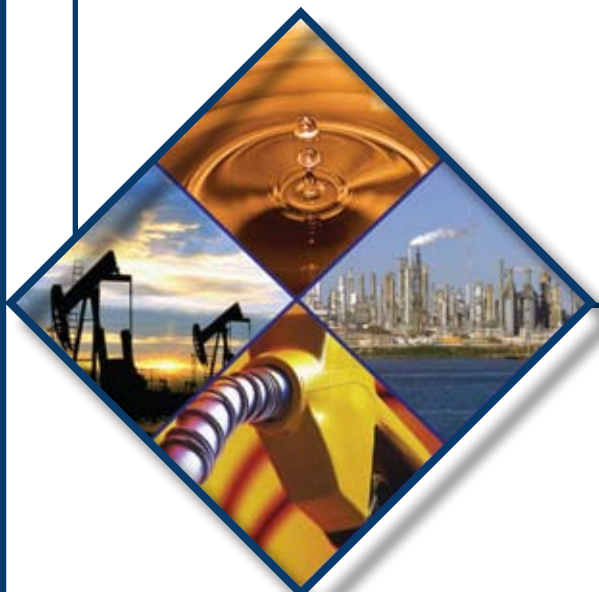
PREMIER 3000 E Profile Cups are Double Open Ended with Lids/ 3 Part Set

Product Description

PREMIER 3000 E Profile cups are disposable 3 piece XRF sample cups consisting of 2 large sleeves (Inner, Outer) and a pre-vented lid which assembles together by way of telescoping into one another delivering a wrinkle free surface producing replicate analytical results.

These XRF Sample Cups are designed with our bi-directional oversize sleeve to facilitate the assembly for the analyst by not having to check which side of the sleeve requires to be placed on. It is coupled with an elongated sleeve that optimizes interference of mating parts. Samples are top loaded and pre-vented lids easily snap onto the Inner.

Catalog No.	OD (mm)	ID (mm)	H (mm)	V (ml)
SC-3332	32	25	23	10
SC-3335	35	28	30	14
SC-3340	40	34	21	14
SC-3340T	40	35	30	18
SC-3345	45	39	34	20



SC-4131
SC-4140

4000 S Profile XRF Sample Cups

Series Description

PREMIER 4000 S Profile XRF Sample Cups are available in both single and double open ended configurations and are designed with our unique bi-directional oversize snap-interlock rings which fasten and engage the cup body to secure rings onto cups. The bi-directional snap interlocking method of sealing cups allow the analyst to facilitate the assembly by not having to check which side of the ring requires to be snapped onto and virtually eradicates potential leaks or spills.

Singe Open Ended Cups

Features at a Glance:

- Snap Interlock Seal
- Bi-directional Ring & Ringlet Design
- Pre-Sorted



Product Description

Single open ended cups are configured and packaged with a cup body, a ringlet and a bi-directional snap interlocking ring. The analyst fills liquid sample into cup body and places X-ray film over the cup. A thin ringlet is then placed over the cup body and X-ray film and is driven downward to a pre-set position at the base of the sample cup. This results in the X-ray film being held in place and stretched across the opening of the cup, producing a taut X-ray film that is ready for the bi-directional snap-interlock oversize ring to be fastened and engaged onto the cup completing the assembly.

Catalog No.	OD (mm)	ID (mm)	H (mm)	V (ml)
SC-4131	32	25	24	10
SC-4140	40	32	24	18



4000 S Profile XRF Sample Cups

SC-4331
SC-4332
SC-4235
SC-4335
SC-4340
SC-4345

Double Open Ended Cups with Lids

Features at a Glance:

- Snap Interlock Seal
- Bi-directional Ring
- Pre-vented Lids & Reservoir
- Handling Pillar
- Pre-Sorted



Product Description

Double open ended cups with lids are configured and packaged with a cup body, a snap Interlocking ring and a lid. The analyst places X-ray film over one end of the open cup body and our bi-directional snap-interlock oversize ring is fastened and engaged onto the cup completing one end of the sample cup assembly. The cup body is then inverted to allow for sample to be filled. Once cups are filled with sample, the analyst simply snaps the pre-vented lid onto the cup completing the assembly. This style cups are suitable for volatiles.

Catalog No.	OD (mm)	ID (mm)	H (mm)	V (ml)
SC-4331	32	26	24	12
SC-4332	32	26	26	14
SC-4235	35	28	30	16
SC-4335	35	28	30	18
SC-4340	40	32	24	18
SC-4345	45	40	32	36



SC-4231
SC-4232
SC-4240
SC-4245

4000 S Profile XRF Sample Cups

Double Open Ended Cups

Features at a Glance:

- Snap Interlock Seal
- Bi-directional Ring
- Microporous Application
- Pre-Sorted



Product Description

Double open ended cups with bi-directional snap-interlock oversize rings are configured and packaged with a cup body and two oversize rings. Alternatively, the analyst utilizes microporous membrane sheets which allow for sealing of volatiles or other materials requiring full enclosure of sample to maintain pressure equalization through gas permeable membrane characteristics. A microporous membrane sheet is placed over one end of the open cup body and snap-interlock oversize ring is fastened and engaged onto the cup completing one end of the sample cup assembly. The cup body is then inverted to allow sample to be filled. The analyst repeats the process of placing the membrane sheet and fastens the second oversize ring completing the assembly.

Catalog No.	OD (mm)	ID (mm)	H (mm)	V (ml)
SC-4231	32	26	24	12
SC-4232	32	26	24	12
SC-4240	40	32	24	18
SC-4245	45	40	30	32



SC-8047
SC-4547

Specialty Cups Suitable for Horiba Instruments

Product Description

PREMIER offers two distinct types of XRF Sample Cups that are suitable for Horiba Instruments. Our SC-4547 is designed with a bi-directional oversize snap-interlocking ring which allows the analyst to facilitate the assembly by not having to check which side of the ring requires to be snapped on. In addition, to secure the assembly the rings fasten and engage the cup body. The snap interlocking method of sealing cups eradicates potential leaks or spills. Alternatively, our SC-8047 is designed as a two piece set and is manufactured from a custom blend of material producing a soft lubricous texture sample cup that is novel and ideal for assembly in high sample throughput laboratories. Both style sample cups are a low profile design which makes it an ideal choice for Horiba Instruments

Single Open Ended Cups

Features at a Glance:

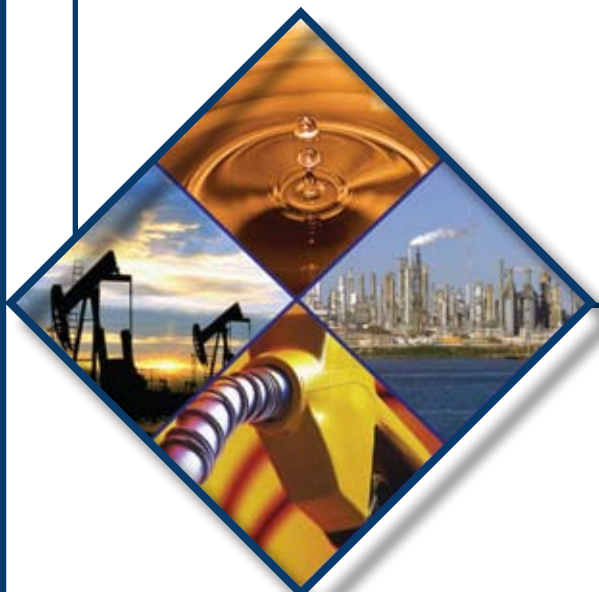
- Custom Blend Mix
- Bi-directional Ring
- Venting Provision
- Pre-Sorted



Catalog No.	OD (mm)	ID (mm)	H (mm)	V (ml)
SC-8047	47	38	18.5	15
SC-4547	47	38	18.5	15

SC-8047 are two piece single open ended cups which are configured and packaged with a cup body and sleeve. The analyst fills liquid sample into the cup body and places X-ray film over the cup. Next the sleeve ring is placed onto the cup sliding downward completing the sample cup assembly.

SC-4547 are three piece single open ended cups which are configured and packaged with a cup body, a ringlet and our bi-directional oversize snap Interlocking ring. The analyst fills liquid sample into the cup body and places X-ray film over the cup. A thin ringlet is then placed over the cup body and X-ray film and is driven downward to a pre-set position at the base of the sample cup. This results in the X-ray film held in place and stretched across the opening of the cup producing a taut X-ray film that is ready for the bi-directional oversize snap-interlock ring to be fastened and engaged onto the cup completing its assembly.



SC-7332

**Double Open Ended Cups
with Lids**

Features at a Glance:

- Precision Aluminum Sleeve Fit
- O-ring Compatible Low Profile Tabs
- Microporous Application
- Pre-Sorted



**Specialty Cups
Suitable for Oxford Instruments®**

PREMIER 7000 OX Series XRF Sample Cups are double open ended disposable Inners with Lids designed for ease of assembly into aluminum sleeve supplied by Oxford Instruments®.

Sample cup inners are engineered to deliver a taut film surface area. The removal of the inner from the aluminum sleeve is easy and quick due to the Inner design that includes two low profile tabs that facilitate disengagement. This style cups are suitable for Oxford Instruments®.

Catalog No.	OD (mm)	ID (mm)	Height (mm)	Volume (ml)
SC-7332	32	30	38.5	18

**Specialty Cups
Micro Cup**

MC-1520

Bi-Directional micro cup assembles from both ends, thus minimizing time and frequency attempts to secure into base. Snap secure lids incorporate pre-venting provision, which allows for overflow of volatiles and containment of liquid sample matter.

Automatic collar-to-base stop geometry maximizes film tautness, enhancing a smooth plane leading edge for analysis. Dual micro-cell configuration of both collar and lid enables versatility with both X-ray and/or microporous films. Large self centering locking base ensures an even surface for smooth plane. Suitable for nominal 32mm XRF instrument holders and adapters.



Catalog No.	OD (mm)	ID (mm)	Height (mm)	Volume (ml)
MC-1520	31	17	21	10



CEMBLES™ Pre-Assembled XRF Sample Cups



Features at a Glance:

- Pre-Assembled
- Saves Time & Money
- Recycled packaging

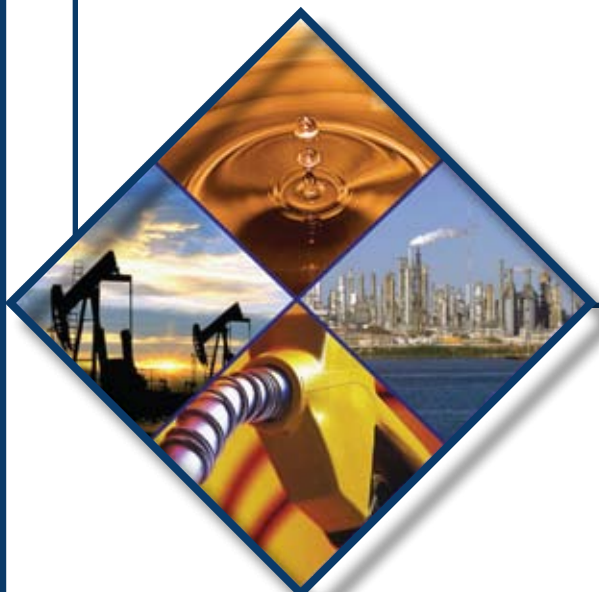


CEMBLES™ are Pre-Assembled XRF Sample Cups that are available in variant configurations of cups and thin films that have been attached and pre-assembled for your convenience.

CEMBLES™ packaging trays are portable and incorporate a specialty wing flap element to ensure that sample cups are safe guarded in place during shipping. Pre-assembled sample cups are fitted into custom removal trays that can be placed by the instrument for easy loading and convenience. User artlessly bends back wing flap tray and fills all sample cups with sample matter within one tray. The user simply snaps lid and tests. Portable trays have viewable bottom cutout circles for users to be able to ensure that the sample is centered and stable.

CEMBLES™ Pre-Assembled XRF Sample Cups and its patent pending packaging are ideal for both high sample throughput laboratories including refineries as well as moderate to small laboratories who may consider reducing laboratory time and money. In addition, CEMBLEM™ packaging is eco-friendly and constructed of recycled material.

CEMBLES™ are a new alternative novel for organizations that traditionally purchase cups and film separately.



PA-100-32-130
PA-120-32-135
PA-140-32-160
PA-160-32-240
PA-180-32-260



CEMBLES™ **Pre-Assembled XRF Sample Cups**

32 mm Cups

Catalog No.	Sample Cup Type	Film Type
PA-100-32-130	SC-3332	Mylar® 3.0μ (0.12 mil)
PA-120-32-135	SC-3332	Mylar® 3.5μ (0.14 mil)
PA-140-32-160	SC-3332	Mylar® 6.0μ (0.24 mil)
PA-160-32-240	SC-3332	Polypropylene 4.0μ (0.16mil)
PA-180-32-260	SC-3332	Polypropylene 6.0μ (0.24 mil)

PA-200-35-130
PA-220-35-135
PA-240-35-160
PA-260-35-240
PA-280-35-260



35 mm Cups

Catalog No.	Sample Cup Type	Film Type
PA-200-35-130	SC-3335	Mylar® 3.0μ (0.12 mil)
PA-220-35-135	SC-3335	Mylar® 3.5μ (0.14 mil)
PA-240-35-160	SC-3335	Mylar® 6.0μ (0.24 mil)
PA-260-35-240	SC-3335	Polypropylene 4.0μ (0.16mil)
PA-280-35-260	SC-3335	Polypropylene 6.0μ (0.24 mil)



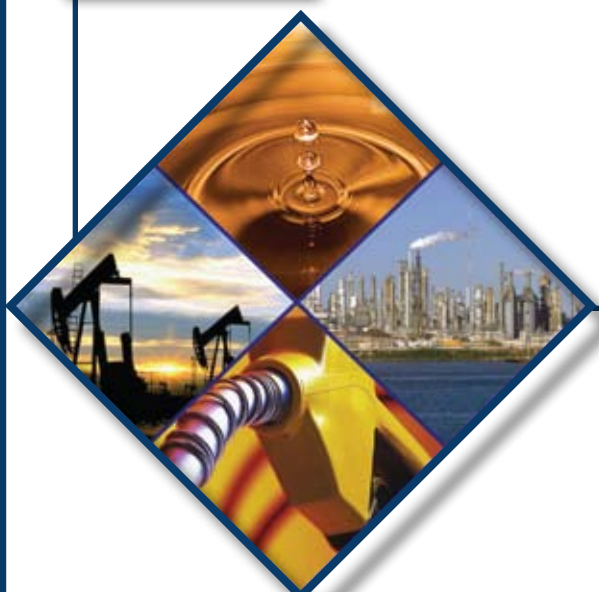
PA-300-40-130
PA-320-40-135
PA-340-40-160
PA-360-40-240
PA-380-40-260



PA-400-40T-130
PA-420-40T-135
PA-440-40T-160
PA-460-40T-240
PA-480-40T-260



PA-400-45130
PA-420-45-135
PA-440-45-160
PA-460-45-240
PA-480-45-260



CEMBLES™ Pre-Assembled XRF Sample Cups

40 mm Cups

Catalog No.	Sample Cup Type	Film Type
PA-300-40-130	SC-3340	Mylar® 3.0µ (0.12 mil)
PA-320-40-135	SC-3340	Mylar® 3.5µ (0.14 mil)
PA-340-40-160	SC-3340	Mylar® 6.0µ (0.24 mil)
PA-360-40-240	SC-3340	Polypropylene 4.0µ (0.16mil)
PA-380-40-260	SC-3340	Polypropylene 6.0µ (0.24 mil)

Catalog No.	Sample Cup Type	Film Type
PA-400-40T-130	SC-3340T	Mylar® 3.0µ (0.12 mil)
PA-420-40T-135	SC-3340T	Mylar® 3.5µ (0.14 mil)
PA-440-40T-160	SC-3340T	Mylar® 6.0µ (0.24 mil)
PA-460-40T-240	SC-3340T	Polypropylene 4.0µ (0.16 mil)
PA-480-40T-260	SC-3340T	Polypropylene 6.0µ (0.24 mil)

45 mm Cups

Catalog No.	Sample Cup Type	Film Type
PA-400-45-130	SC-3345	Mylar® 3.0µ (0.12 mil)
PA-420-45-135	SC-3345	Mylar® 3.5µ (0.14 mil)
PA-440-45-160	SC-3345	Mylar® 6.0µ (0.24 mil)
PA-460-45-240	SC-3345	Polypropylene 4.0µ (0.16 mil)
PA-480-45-260	SC-3345	Polypropylene 6.0µ (0.24 mil)

XRF Thin Film

Thin Film sample support materials are utilized in conjunction with XRF sample cups for securing and retaining various forms of samples that require sample preparation for analysis by an XRF Instrument. These types of samples may be categorized as liquids, powders, or solid specimens.

There are four fundamental attributes that should be considered in the determination of selecting Thin Film materials. The material selection should encompass transmission, which is essential for light elements, purity, physical strength and thickness. Since thickness measurements by XRF are dependent on the film's density, to know the true thickness, one must know the density. As a side note, Thin Films density can be obtained directly using the x-ray reflectivity method.

The suitable selection of Thin Films available as attachments to sample cups for X-Ray Fluorescence depends upon the sample at hand and matched with characteristics which cover a wide range of wavelengths for various types of X-ray Thin Films. Polyester films such as Mylar® are generally the typical selection for substances such as acids, bases, solvents along with hydrocarbon oils and silicones. Mylar® exhibits good tensile strength, endures reasonable resistance to chemical attack and is economically priced. Mylar® Films also provide very good transmission characteristics over a broader range of compounds. Mylar® 6μ is the most resilient film available to withstand almost all chemicals and solvents. It is ideal for lead analysis in gasoline.

An alternative choice for most types of analysis and ideal for standard-less as well as analysis of loose powders, lubricating additives and industrial waste is Polypropylene. Polypropylene exhibits slightly lower tensile strength than Mylar®, but also tends to exhibit greater endurance to chemical attacks from a wider range of compounds. Kapton® (Polyimide) may also be selected as a Thin Film Sample Support Material. Kapton® (Polyimide) exhibits the lowest transmission characteristic than most other Thin Films. Keep in mind metallic Impurity levels will define your suitable selection and your sample's chemical characteristics may ultimately dictate your choice of Thin Film Sample Support Materials.

Trace element analysis should be given special consideration with respect to purity levels inherent in various Thin Films. While generally not at levels of concern for most applications, Mylar® Films may contain ppm levels of Ca, Cu, Fe, P, Sb, and Zn. Alternatively, Polypropylene Films may contain trace levels of Al, Ca, Cu, Fe, P, Ti, Tn, and Zr. Therefore, because Kapton® (Polyimide) is virtually free from trace metal impurities, Kapton® would be the appropriate selection of Thin Film for low-level determinations of these elements.

PREMIER'S Thin Film sample support materials are carefully selected for minimum trace levels of impurities and uniformity of thickness to ensure reproducible analytical results from one lot to another. PREMIER Thin Films are available in Continuous Rolls; Pre-Cut Sheets, Pre-Cut Circles and Cembles (pre-assembled cups). The final selection of your X-ray Thin Film should be tested outside of the XRF Instrument.

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Micro-Polyester™ is a Trademark of PREMIER Lab Supply, Inc.



TF-425
TF-475
TF-475-3
TF-412
TF-412-3



XRF Thin Film Rolls

Kapton® Rolls

Catalog No.	Gauge thickness	Dimensions
TF-425	25.4μ (1.15 mil)	3" x 50' (76mm x 15.2m)
TF-475	7.5μ (0.30 mil)	3" x 50' (76mm x 15.2m)
TF-475-3	7.5μ (0.30 mil)	3" x 300' (76mm x 91.4m)
TF-412	12.7μ (0.50 mil)	3" x 50' (76mm x 15.2m)
TF-412-3	12.7μ (0.50 mil)	3" x 300' (76mm x 91.4m)

TF-025
TF-050

Microporous Rolls

Catalog No.	Type	Dimensions
TF-025	Microporous Polypropylene	2.5" x16.75' (64mm x 5.1m)
TF-050	Microporous Teflon®	2.5" x16.75' (64mm x 5.1m)

Features at a Glance:

- Available in rolls
- Polypropylene or Teflon®
- Lot number tracking system
- Ideal for venting or pressure equalization
- Allows gases to slowly pass through pores



TF-125
TF-135
TF-160
TF-112



XRF Thin Film Rolls

Mylar® Rolls

Catalog No.	Gauge thickness	Dimensions
TF-125	2.5μ (0.10 mil)	3" x 300' (76mm x 91.4m)
TF-135	3.5μ (0.14 mil)	3" x 300' (76mm x 91.4m)
TF-160	6.0μ (0.24 mil)	3" x 300' (76mm x 91.4m)
TF-112	12.0μ (0.50 mil)	3" x 300' (76mm x 91.4m)

TF-115

Features at a Glance:

- Excellent tensile strength
- Good chemical resistance
- Well suited for light elements in thinner gauges

TF-240
TF-250
TF-260
TF-212
TF-225
TF-225-4



Micro-Polyester™ Rolls

Catalog No.	Gauge thickness	Dimensions
TF-115	1.5μ (0.06 mil)	3" x 300' (76mm x 91.4m)

Polypropylene Rolls

Catalog No.	Gauge thickness	Dimensions
TF-240	4.0μ (0.16mil)	3" x 300' (76mm x 91.4m)
TF-250	5.0μ (0.20mil)	3" x 300' (76mm x 91.4m)
TF-260	6.0μ (0.24mil)	3" x 300' (76mm x 91.4m)
TF-212	12.0μ (0.50mil)	3" x 300' (76mm x 91.4m)
TF-225	25.4μ (1.15mil)	3" x 50' (76mm x 15.2m)
TF-225-4	25.4μ (1.15mil)	4" x 50' (102mm x 15.2m)



TF-125-255
TF-125-2510
TF-130-355
TF-135-30
TF-135-255
TF-135-2510
TF-135-355
TF-160-30
TF-160-255
TF-160-2510
TF-160-355

Features at a Glance:

- Excellent tensile strength
- Good chemical resistance
- Well suited for light elements in thinner gauges



LS-135-30
LS-135-255
LS-135-355
LS-160-30
LS-160-255
LS-160-355
LS-160-2510



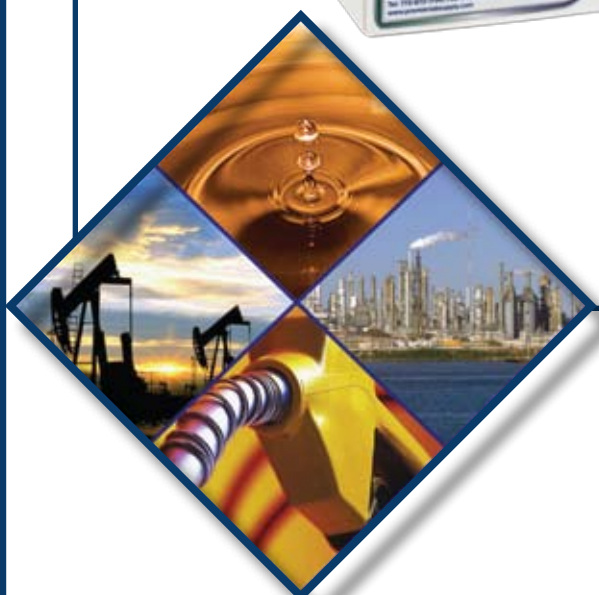
XRF Thin Film Pre-Cut Circles

Mylar® Pre-Cut Circles

Catalog No.	Gauge thickness	Count Circles	Diameter
TF-125-255	2.5µ (0.10 mil)	500	2.5" (63.5mm)
TF-125-2510	2.5µ (0.14 mil)	1,000	2.5" (63.5mm)
TF-130-355	3.0µ (0.12 mil)	500	3.5" (89mm)
TF-135-30	3.5µ (0.14 mil)	100	3.0" (76mm)
TF-135-255	3.5µ (0.14 mil)	500	2.5" (63.5mm)
TF-135-2510	3.5µ (0.14 mil)	1,000	2.5" (63.5mm)
TF-135-355	3.5µ (0.14 mil)	500	3.5" (89mm)
TF-160-30	6.0µ (0.24 mil)	100	3.0" (76mm)
TF-160-255	6.0µ (0.24 mil)	500	2.5" (63.5mm)
TF-160-2510	6.0µ (0.24 mil)	1,000	2.5" (63.5mm)
TF-160-355	6.0µ (0.24 mil)	500	3.5" (89mm)

Mylar® Low Sulfur Film

Catalog No.	Gauge thickness	Count Circles	Diameter
LS-135-30	3.5µ (0.14 mil)	100	3.0" (76mm)
LS-135-255	3.5µ (0.14 mil)	500	2.5" (63.5mm)
LS-135-355	3.5µ (0.14 mil)	500	3.5" (89mm)
LS-160-30	6.0µ (0.24 mil)	100	3.0" (76mm)
LS-160-255	6.0µ (0.24 mil)	500	2.5" (63.5mm)
LS-160-355	6.0µ (0.24 mil)	500	3.5" (89mm)
LS-160-2510	6.0µ (0.24 mil)	1,000	2.5" (63.5mm)



TF-240-30
TF-240-255
TF-240-355
TF-240-2510
TF-250-255
TF-250-2510
TF-260-30
TF-260-255
TF-260-2510
TF-260-355



XRF Thin Film Pre-Cut Circles

Polypropylene Pre-Cut Circles

Catalog No.	Gauge thickness	Count Circles	Diameter
TF-240-30	4.0µ (0.16mil)	100	3.0" (76mm)
TF-240-255	4.0µ (0.16mil)	500	2.5" (63.5mm)
TF-240-355	4.0µ (0.16mil)	500	3.5" (89mm)
TF-240-2510	4.0µ (0.16mil)	1,000	2.5" (63.5mm)
TF-250-255	5.0µ (0.20mil)	500	2.5" (63.5mm)
TF-250-2510	5.0µ (0.20mil)	1,000	2.5" (63.5mm)
TF-260-255	6.0µ (0.24mil)	500	2.5" (63.5mm)
TF-260-2510	6.0µ (0.24mil)	1,000	2.5" (63.5mm)
TF 260-30	6.0µ (0.24mil)	100	3.0" (76mm)
TF-260-355	6.0µ (0.24mil)	500	3.5" (89mm)

Features at a Glance:

- General Purpose
- Good chemical resistance
- Good Transmission

LS-240-30
LS-240-255
LS-240-2510
LS-240-355
LS-260-355



Polypropylene Low Sulfur

Catalog No.	Gauge thickness	Count Circles	Diameter
LS-240-30	4.0µ (0.16mil)	100	3.0" (76mm)
LS-240-255	4.0µ (0.16mil)	500	2.5" (63.5mm)
LS-240-2510	4.0µ (0.16mil)	1,000	2.5" (63.5mm)
LS-240-355	4.0µ (0.16mil)	500	3.5" (89mm)
LS-260-355	6.0µ (0.24 mil)	500	3.5" (89mm)



TF-125-345
TF-125-3410
TF-135-345
TF-135-3410
TF-160-345
TF-160-3410
TF-112-345
TF-112-3410



XRF Thin Film Sheets

Mylar® Sheets

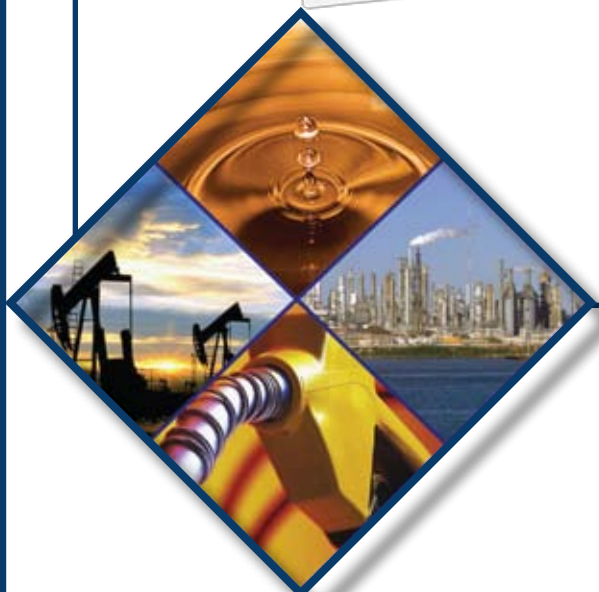
Catalog No.	Gauge thickness	Count Sheets	Dimensions
TF-125-345	2.5μ (0.10 mil)	500	3" x 3" (76 x 76mm)
TF-125-3410	2.5μ (0.10 mil)	1,000	3" x 3" (76 x 76mm)
TF-135-345	3.5μ (0.14 mil)	500	3" x 3" (76 x 76mm)
TF-135-3410	3.5μ (0.14 mil)	1,000	3" x 3" (76 x 76mm)
TF-160-345	6.0μ (0.24 mil)	500	3" x 3" (76 x 76mm)
TF-160-3410	6.0μ (0.24 mil)	1,000	3" x 3" (76 x 76mm)
TF-112-345	12.0μ (0.50 mil)	500	3" x 3" (76 x 76mm)
TF-112-3410	12.0μ (0.50 mil)	1,000	3" x 3" (76 x 76mm)

TF-240-345
TF-240-3410
TF-250-345
TF-250-3410
TF-260-345
TF-260-3410
TF-212-345
TF-212-3410



Polypropylene Sheets

Catalog No.	Gauge thickness	Count Sheets	Dimensions
TF-240-345	4.0μ (0.16mil)	500	3" x 3" (76 x 76mm)
TF-240-3410	4.0μ (0.16mil)	1,000	3" x 3" (76 x 76mm)
TF-250-345	5.0μ (0.20mil)	500	3" x 3" (76 x 76mm)
TF-250-3410	5.0μ (0.20mil)	1,000	3" x 3" (76 x 76mm)
TF-260-345	6.0μ (0.24mil)	500	3" x 3" (76 x 76mm)
TF-260-3410	6.0μ (0.24mil)	1,000	3" x 3" (76 x 76mm)
TF-212-345	12.0μ (0.50mil)	500	3" x 3" (76 x 76mm)
TF-212-3410	12.0μ (0.50mil)	1,000	3" x 3" (76 x 76mm)



TF-115-345
TF-115-3410



XRF Thin Film Sheets

Micro-Polyester™ Sheets

Catalog No.	Gauge thickness	Count Sheets	Dimensions
TF-115-345	1.5µ (0.06 mil)	500	3" x 3" (76 x 76mm)
TF-115-3410	1.5µ (0.06 mil)	1000	3" x 3" (76 x 76mm)

TF-425-345
TF-475-345
TF-412-345

Features at a Glance:

- Virtually free from trace elements
- Resistant to most organics, fuel, lubricants and solvents
- Extremely strong



Kapton® Sheets

Catalog No.	Gauge thickness	Dimensions	Count Sheets
TF-425-345	25.4µ (1.15 mil)	3" x 3" (76 x 76mm)	500
TF-475-345	7.5µ (0.30 mil)	3" x 3" (76 x 76mm)	500
TF-412-345	12.7µ (0.50 mil)	3" x 3" (76 x 76mm)	500



XHTP-2826
XHTP-3826

Paper

Thermal printer paper available in high quality brilliant white in various lengths, suitable for use with Horiba XRF instruments



Printer Paper

Catalog No.	Type	Dimensions	Package
XHTP-2826	For Horiba XRF Instruments	2.25" x 81' (57mm x 24 m)	6 rolls/ pack
XHTP-3826	For Horiba XRF Instruments	3.125" x 81' (80mm x 25m)	6 rolls/ pack

F-2840-47
F-2540
F-02-070

Filter Paper

Catalog No.	Type	Thick-ness	Diameter	Grade	Package
F-2840-47	Glass Microfibre filters suitable for lab filtration	1.6µm	47mm	GF/A	100/ pack
F-2540	Filter Paper Circles	-	24mm	540	100/ pack
F-44-150	Filter Paper Circles	-	150mm	44	100/ pack
F-02-070	Standard Filter Circles	-	70mm	2	100/ pack



TF-500

XRF Tape

Features at a Glance:

- Sulfur/Halogen free
- Ideal for measurements of single parts



Catalog No.	Type	Dimensions
TF-500	XRF Tape	25mm x 66m Roll

Sample Prep Tools & Adapters

PT-32235
PT-4547

Sample prep tools effectively assist in sample cup assembly. Made of high density polyethylene, they are used to push the ring downward onto the cup for a snap fit seal. The hole in the middle of the tool allows air to escape, which prevents the film from sagging.



Catalog No.	Type	Pack
PT-3235	Preparation Tool for 32 and 35 mm XRF sample cups	2 pcs /set
PT-4547	Preparation Tool for Sample Cups, Max Dia. 47mm	2pcs/set



1100-0801
1104-1501
1108-2301
1101-0805

Pipettes

- An extensive line of transfer pipettes is offered in a variety of sizes and styles. Choose from our standard graduated and non-graduated transfer pipettes, fine tip transfer pipettes, mini transfer pipettes and extra large 12" transfer pipettes.
- Produced from flexible polyethylene, these pipettes are perfect for all liquid transfer applications.

Non Graduated

Catalog No.	Type	Description	Package
1100-0801	Standard Size Transfer Pipette, Non Sterile	L 156mm, Stem Dia 7.9mm, Total CC 7.7ml; Bulb Draw: 3.2mm; 20 drops/ml	500/Package
1104-1501	Transfer Pipette, Non Sterile	CC 15ml, L 155mm	250/Package
1108-2301	Transfer Pipette, Non Sterile	CC 23ml, L 300mm	100/Package
1101-0805	Standard Size Transfer Pipette	L 156mm, Stem Dia 7.9mm	5000/Package

1120-0301
1150-0501
1180-0701

Graduated

Catalog No.	Type	Description	Package
1120-0301	Transfer Pipette, Non Sterile	CC 3ml, L 140mm	500/Package
1150-0501	Transfer Pipette, Non Sterile	CC 5ml, L 145mm	500/Package
1180-0701	Transfer Pipette, Non Sterile	CC 7ml, L 155mm	500/Package

1340-100-0
1340-100-5
1340-100-10
1340-100-15
1340-100-20
1340-100-25
1340-100-50
1340-100-100

Manufactured for use in the analysis of sulphur in #2 diesel fuel by XRF analysis, using matrix-matched standards. Suitable for use with ASTM methods D2622, D4294, D7039, D7212, D7220 and others.

Petroleum Standards

Sulfur Standard #2 Diesel Fuel

Catalog No.	Concentration (µg/g)	Concentration (WT%)	Volume (ml)
1340-100-0	0	0.000	100
1340-100-5	5	0.001	100
1340-100-10	10	0.001	100
1340-100-15	15	0.002	100
1340-100-20	20	0.002	100
1340-100-25	25	0.003	100
1340-100-50	50	0.005	100
1340-100-100	100	0.010	100

1350-100-0
1350-100-5
1350-100-10
1350-100-25
1350-100-75
1350-100-100

Manufactured for use in the analysis of sulfur in gasoline or other light petroleum products by a variety of analytical techniques. Suitable for use with ASTM methods D2622, D3120, D3246, D3961, D4045, D4294, D5453, D6212, D6334, D6428, D6445, D7039, D7220 and others.

Sulfur Standard in Isooctane

Catalog No.	Concentration (µg/g)	Concentration (WT%)	Volume (ml)
1350-100-0	0	0.000	100
1350-100-5	5	0.001	100
1350-100-10	10	0.001	100
1350-100-25	25	0.003	100
1350-100-75	75	0.008	100
1350-100-100	100	0.010	100



1323-100-10
1323-100-30
1323-100-50
1323-100-100
1323-100-300
1323-100-500
1323-100-900

Petroleum Standards

Multi-Element Metallo-Organic Standard

Matrix:

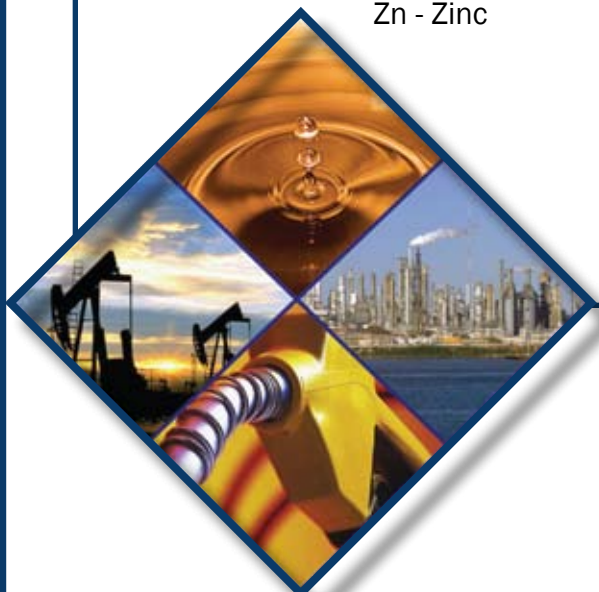
Hydrocarbon Oil

Elements (conc.):

Al - Aluminum
Sb - Antimony
Ba - Barium
B - Boron
Cd - Cadmium
Ca - Calcium
Cr - Chromium
Cu - Copper
Fe - Iron
Pb - Lead
Mg - Magnesium
Mn - Manganese
Mo - Molybdenum
Ni - Nickel
P - Phosphorus
K - Potassium
Si - Silicon
Ag - Silver
Na - Sodium
Sn - Tin
Ti - Titanium
V - Vanadium
Zn - Zinc

These multi-element metallo-organic standards are ideally suited for the analysis of metal additives, wear metals and contaminants in used engine oils by ICP, RDE or AA spectrometers, although they can be used for other metallo-organic analysis as well.

Catalog No.	Concentration (µg/g)	Volume (ml)
1323-100-10	10	100
1323-100-30	30	100
1323-100-50	50	100
1323-100-100	100	100
1323-100-300	300	100
1323-100-500	500	100
1323-100-900	900	100



1320-100-0
1320-100-5
1320-100-10
1320-100-15
1320-100-20
1320-100-25
1320-100-50
1320-100-75
1320-100-100
1320-100-1000
1320-100-5000
1320-100-1%
1320-100-2%
1320-100-3%
1320-100-4%
1320-100-5%

Sulfur standards in light mineral oil are suitable for use with ASTM methods D2622, D4294, D7039, D7212, D7220 and others.

1360-100-2500
1360-100-5000
1360-100-1%
1360-100-2%
1360-100-3%
1360-100-4%
1360-100-5%

Manufactured for use in the analysis of sulfur in residual oil by XRF analysis. Suitable for use with ASTM methods D2622, D3120, D3246, D4294, D5453, D6334, D6445 and others.

Petroleum Standards

Sulfur Standard in Light Mineral Oil

Catalog No.	Concentration (µg/g)	Concentration (WT%)	Volume (ml)
1320-100-0	0	0.000	100
1320-100-5	5	0.001	100
1320-100-10	10	0.001	100
1320-100-15	15	0.002	100
1320-100-20	20	0.002	100
1320-100-25	25	0.003	100
1320-100-50	50	0.005	100
1320-100-75	75	0.008	100
1320-100-100	100	0.010	100
1320-100-1000	1000	0.100	100
1320-100-5000	5000	0.500	100
1320-100-1%	10000	1.00	100
1320-100-2%	20000	2.00	100
1320-100-3%	30000	3.00	100
1320-100-4%	40000	4.00	100
1320-100-5%	50000	5.00	100

Sulfur Standard in Residual Oil

Catalog No.	Concentration (µg/g)	Concentration (WT%)	Volume (ml)
1360-100-2500	2500	0.250	100
1360-100-5000	5000	0.500	100
1360-100-1%	10000	1.00	100
1360-100-2%	20000	2.00	100
1360-100-3%	30000	3.00	100
1360-100-4%	40000	4.00	100
1360-100-5%	50000	5.00	100



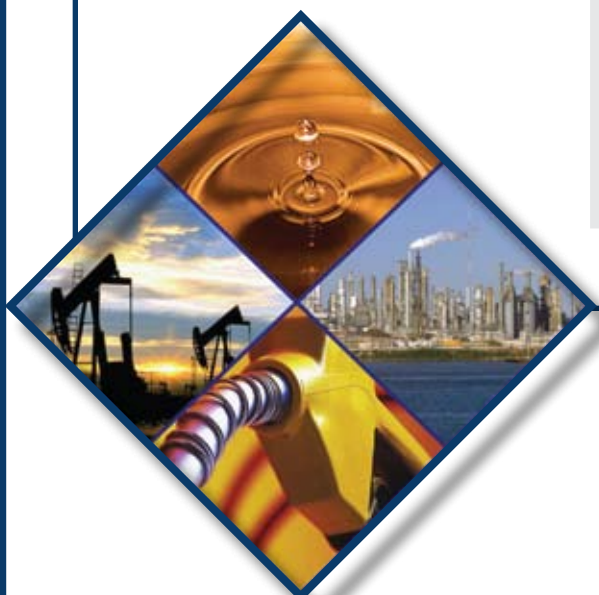
Petroleum Standards

Single-Element Metallo-Organic Standard

1300-50-1000-OHG
1300-50-1000-OAS
1300-50-1000-OAG
1300-50-1000-OAL
1300-50-1000-OB
1300-50-1000-OBA
1300-50-1000-OBE
1300-50-1000-OBi
1300-50-1000-OCA
1300-50-1000-OCD
1300-50-1000-OCO
1300-50-1000-OCR
1300-50-1000-OCU
1300-50-1000-OFE
1300-50-1000-OK
1300-50-1000-OLA
1300-50-1000-OLi
1300-50-1000-OMG
1300-50-1000-OMN
1300-50-1000-OMO

These single-element metallo-organic standards are manufactured from sulfonate-based raw materials. They are ideal for the calibration of AA, ICP, DCP, RDE and XRF spectrometers for the analysis of elements in oil and other organic liquids. Available in concentrations of 1000µg/g and 5000µg/g.

Catalog No.	Element	Concentration (µg/g)	Size
1300-50-1000-OHG	Mercury	1000	50
1300-50-1000-OAS	Arsenic	1000	50
1300-50-1000-OAG	Silver	1000	50
1300-50-1000-OAL	Aluminum	1000	50
1300-50-1000-OB	Boron	1000	50
1300-50-1000-OBA	Barium	1000	50
1300-50-1000-OBE	Beryllium	1000	50
1300-50-1000-OBi	Bismuth	1000	50
1300-50-1000-OCA	Calcium	1000	50
1300-50-1000-OCD	Cadmium	1000	50
1300-50-1000-OCO	Cobalt	1000	50
1300-50-1000-OCR	Chromium	1000	50
1300-50-1000-OCU	Copper	1000	50
1300-50-1000-OFE	Iron	1000	50
1300-50-1000-OK	Potassium	1000	50
1300-50-1000-OLA	Lanthanum	1000	50
1300-50-1000-OLi	Lithium	1000	50
1300-50-1000-OMG	Magnesium	1000	50
1300-50-1000-OMN	Manganese	1000	50
1300-50-1000-OMO	Molybdenum	1000	50



1300-50-1000-ONA
1300-50-1000-ONI
1300-50-1000-OP
1300-50-1000-OPB
1300-50-1000-OS
1300-50-1000-OSB
1300-50-1000-OSC
1300-50-1000-OSE
1300-50-1000-OSI
1300-50-1000-OSN
1300-50-1000-OSR
1300-50-1000-OTI
1300-50-1000-OTL
1300-50-1000-OV
1300-50-1000-OY
1300-50-1000-OZN
1300-50-1000-OZR

Petroleum Standards

Single-Element Metallo-Organic Standard

Catalog No.	Element	Concentration (µg/g)	Size
1300-50-1000-ONA	Sodium	1000	50
1300-50-1000-ONI	Nickel	1000	50
1300-50-1000-OP	Phosphorous	1000	50
1300-50-1000-OPB	Lead	1000	50
1300-50-1000-OS	Sulfur	1000	50
1300-50-1000-OSB	Antimony	1000	50
1300-50-1000-OSC	Scandium	1000	50
1300-50-1000-OSE	Selenium	1000	50
1300-50-1000-OSI	Silicon	1000	50
1300-50-1000-OSN	Tin	1000	50
1300-50-1000-OSR	Strontium	1000	50
1300-50-1000-OTI	Titanium	1000	50
1300-50-1000-OTL	Thallium	1000	50
1300-50-1000-OV	Vanadium	1000	50
1300-50-1000-OY	Yttrium	1000	50
1300-50-1000-OZN	Zinc	1000	50
1300-50-1000-OZR	Zirconium	1000	50

These single-element metallo-organic standards are manufactured from sulfonate-based raw materials. They are ideal for the calibration of AA, ICP, DCP, RDE and XRF spectrometers for the analysis of elements in oil and other organic liquids. Available in concentrations of 1000µg/g and 5000µg/g.



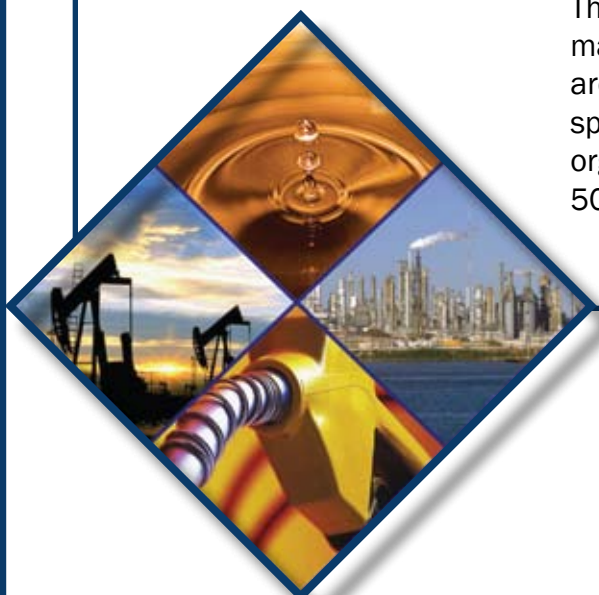
1300-50-5000-ONI
1300-50-5000-OP
1300-50-5000-OPB
1300-50-5000-OS
1300-50-5000-OSB
1300-50-5000-OSC
1300-50-5000-OSI
1300-50-5000-OSN
1300-50-5000-OSR
1300-50-5000-OTI
1300-50-5000-OV
1300-50-5000-OY
1300-50-5000-OZN
1300-50-5000-OZR

Petroleum Standards

Single-Element Metallo-Organic Standard

Catalog No.	Element	Concentration (µg/g)	Size
1300-50-5000-ONI	Nickel	5000	50
1300-50-5000-OP	Phosphorous	5000	50
1300-50-5000-OPB	Lead	5000	50
1300-50-5000-OS	Sulfur	5000	50
1300-50-5000-OSB	Antimony	5000	50
1300-50-5000-OSC	Scandium	5000	50
1300-50-5000-OSI	Silicon	5000	50
1300-50-5000-OSN	Tin	5000	50
1300-50-5000-OSR	Strontium	5000	50
1300-50-5000-OTI	Titanium	5000	50
1300-50-5000-OV	Vanadium	5000	50
1300-50-5000-OY	Yttrium	5000	50
1300-50-5000-OZN	Zinc	5000	50
1300-50-5000-OZR	Zirconium	5000	50

These single-element metallo-organic standards are manufactured from sulfonate-based raw materials. They are ideal for the calibration of AA, ICP, DCP, RDE and XRF spectrometers for the analysis of elements in oil and other organic liquids. Available in concentrations of 1000µg/g and 5000µg/g.



1300-50-5000-OSE
1300-50-5000-OTL
1300-50-5000-OAG
1300-50-5000-OAL
1300-50-5000-OAS
1300-50-5000-OB
1300-50-5000-OBA
1300-50-5000-OBE
1300-50-5000-OB
1300-50-5000-OCI
1300-50-5000-OCA
1300-50-5000-OCD
1300-50-5000-OCO
1300-50-5000-OCR
1300-50-5000-OCU
1300-50-5000-OFE
1300-50-5000-OHG
1300-50-5000-OK
1300-50-5000-OLA
1300-50-5000-OLI
1300-50-5000-OMG
1300-50-5000-OMN
1300-50-1000-OMO
1300-50-5000-ONA

These single-element metallo-organic standards are manufactured from sulfonate-based raw materials. They are ideal for the calibration of AA, ICP, DCP, RDE and XRF spectrometers for the analysis of elements in oil and other organic liquids. Available in concentrations of 1000µg/g and 5000µg/g.

Petroleum Standards

Single-Element Metallo-Organic Standard

Catalog No.	Element	Concentration (µg/g)	Size
1300-50-5000-OSE	Selenium	5000	50
1300-50-5000-OTL	Thallium	5000	50
1300-50-5000-OAG	Silver	5000	50
1300-50-5000-OAL	Aluminum	5000	50
1300-50-5000-OAS	Arsenic	5000	50
1300-50-5000-OB	Boron	5000	50
1300-50-5000-OBA	Barium	5000	50
1300-50-5000-OBE	Beryllium	5000	50
1300-50-5000-OB	Bismuth	5000	50
1300-50-5000-OCA	Calcium	5000	50
1300-50-5000-OCD	Cadmium	5000	50
1300-50-5000-OCO	Cobalt	5000	50
1300-50-5000-OCR	Chromium	5000	50
1300-50-5000-OCU	Copper	5000	50
1300-50-5000-OFE	Iron	5000	50
1300-50-5000-OHG	Mercury	5000	50
1300-50-5000-OK	Potassium	5000	50
1300-50-5000-OLA	Lanthanum	5000	50
1300-50-5000-OLI	Lithium	5000	50
1300-50-5000-OMG	Magnesium	5000	50
1300-50-5000-OMN	Manganese	5000	50
1300-50-5000-OMO	Molybdenum	5000	50
1300-50-5000-ONA	Sodium	5000	50



1420-445-446
1440-445-446

Viscometer Vials

Designed for use with CANNON Automatic Viscometers, our sample vials are available in glass and plastic.

Catalog No.	Type	Description	Pack
1420-445-446	For Cannon CAV-2200 Viscometer, Glass, Flat bottom	24x62mm	144/Pack
1440-445-446	For Cannon CAV-220 Viscometer, Translucent polypropylene, Flat bottom	24x62mm	1000/Pack

915-4530-120
915-4530-135
915-4530-230

Petrochemical Glassware

We offer borosilicate and quartz scientific laboratory glassware, as well as repair and custom glassware service



Micro Carbon Testing Vials

Catalog No.	Type	Description	Pack
915-4530-120	Shell Type, Plain Top, Short Style, Open Ended, for MCT; Method 4530	CC 0.5; O/D 12mm; L 35mm	100/Pack
915-4530-135	Shell Type, Plain Top, Short Style, Open Ended, for MCT; Method 4530	CC 0.5; O/D 12mm; L 35mm	1000/Pack
915-4530-230	Shell Type, Plain Top, Short Style, Open Ended, without Closure	CC 4; L 70mm O/D 21mm;	Lab Pack, 144

900-2872-10

Rolling Thin Film Bottle

Catalog No.	Description
900-2872-10	Rolling Thin Film Bottle



900-86-112
900-86-114
900-86-301
900-86-302
900-86-306
900-86-600
900-86-602
900-86-700



Method ASTM D86
Distillation of Petroleum
Products at Atmospheric
Pressure

Petrochemical Glassware

Cylinders

Catalog No.	Type	Description	Pack
900-86-112	100 ml ADA Receiving Cyl for use with Metal Base	For OptiDist	Each
900-86-114	100 ml ADA Receiving Cyl with Glass Base	For OptiDist	Each
900-86-301	100 ml ADA Receiving Cyl for use with Metal Base	For Herzog	Each
900-86-302	100 ml ADA Receiving Cyl	For Precision Scientific	Each
900-86-306	100 ml ADA Receiving Cyl with Glass Base	For Herzog	Each
900-86-600	100 ml ADA Cylinder for use with Metal Base	For ISL	Each
900-86-602	100 ml ADA Receiving Cyl with Glass Base	For ISL	Each
900-86-700	5ml, Residue Cyl Graduations 0.1ml	For Herzog, ISL & Precision Scientific	Each

900-86-901
900-86-902
900-86-903
900-86-904

Temperature Probes

Catalog No.	Type	Description	Pack
900-86-901	ISL	Class A certified 1 Point Calibration	Each
900-86-902	ISL	Class A certified 3 Point Calibration	Each
900-86-903	Herzog	Class A certified 1 Point Calibration	Each
900-86-904	Herzog	Class A certified 3 Point Calibration	Each



900-86-100
900-86-110
900-86-111
900-86-113
900-86-116
900-86-130
900-86-150
900-86-160
900-86-170
900-86-250
900-86-420
900-86-430
901-1160-301

Petrochemical Glassware

Distillation Flasks

- Distillation flasks are suitable for use with Herzog™, Precision Scientific™ and Haage™ automatic distillation analyzers.
- Flasks have a side arm, reference lines for temperature probe and a tooled top for accepting centering devices.
- Items are sold by the shelf pack.



**Method ASTM D86
Distillation of Petroleum
Products at Atmospheric
Pressure**

Catalog No.	Type	Height	Description	Pack
900-86-100	10ml	90mm	For ISL PMD 100	Each
900-86-110	125ml	215mm	For Precision Scientific	6
900-86-111	125ml	215mm	For OptiDist	6
900-86-113	200ml	215mm	For OptiDist	6
900-86-116	125ml, Quartz	215mm	Suitable for OptiDist	Each
900-86-130	200ml	215mm	For Herzog/ Precision Scientific	6
900-86-150	125ml	215mm	For Herzog/Petro Test	6
900-86-160	125ml, Quartz	215mm	For all except ISL	Each
900-86-170	200ml, Quartz	215mm	For Herzog/ Precision Scientific	Each
900-86-250	200ml	215mm	For Herzog/ Petro Test	6
900-86-420	125ml	215mm	For ISL 5G	6
900-86-430	200ml	215mm	For ISL 5G	6
901-1160-301	500ml	Top Joint 35/25	For Thermowell	Each



900-86-800

Petrochemical Glassware



Stoppers

Catalog No.	Description	Pack
900-86-800	For Distilling Flask D86-10	5

900-95-9110
900-95-9125
900-95-9210
900-95-800

Method ASTM D95 Water in Petroleum Products



900-1319-110
900-1319-210
900-1319-310

Method ASTM D1319 Hydrocarbon Types in Liquid Petroleum by F.I.A.

Distillation Receivers

Catalog No.	Type	Description	Pack
900-95-9110	10ml	Dean Stark with Return Tube	Each
900-95-9125	25ml	Dean Stark with Return Tube	Each
900-95-9210	2ml	Bidwell Sterling	Each
900-95-800	2ml, Graduation 0.05 to 2ml	Bidwell Sterling	Each

Charging columns

Catalog No.	Type	Description	Pack
970-1319-110	410 mm, Adsorption	Tapered End	Each
970-1319-210	410 mm, Adsorption	Plain End	Each
970-1319-310	1610mm, Adsorption Bore	Precision Bore	Each



900-86-118
900-86-204



900-86-201



970-1319-120
970-1319-220



EX-6560-10
EX-6560-20
EX-6560-30
EX-6560-35



Petrochemical Glassware

O-rings

Catalog No.	Description	Pack
900-86-118	O Rings for OptiDist Receiving Cylinder	10
900-86-204	Viton Compression O-Rings for ISL Centering Device	5

Centering Device

Catalog No.	Description	Pack
900-86-201	Centering device for Herzog	Each

Tubes

Catalog No.	Description	Pack
970-1319-120	FIA Tube, Tapered, O.D. x I.D.: 3mm x 1.5mm	100
970-1319-220	FIA Tube, Plain End, O.D. x I.D.: 3mm x 1.5mm	100

ASTM D6560

Asphaltenes in Crude Petroleum (IP143)

Catalog No.	Description	Pack
EX-6560-10	Leibing 300mm Condenser with an upper stem & lower 34/45 inner drip joint	Each
EX-6560-20	Extractor AST 6560-2 - IP Top Joint: 34/45 Bottom Joint: 24/40	Each
EX-6560-30	250mL Erlenmeyer flask with 24/40 joint.	Each
EX-6530-35	500mL Erlenmeyer flask with 24/40 joint.	Each

963-10-1000
963-10-2000
963-10-500

Petrochemical Glassware



Separatory Funnels

Catalog No.	Description	Stopcock	Stopper	Pack
963-10-1000	1000ml, Squibs, Complete	#4	#27	Each
963-10-2000	2000ml, Squibs, Complete	#6	#38	Each
963-10-500	500ml, Squibs, Complete	#4	#27	Each
963-10-250	250ml, Squibs, Complete	#4	#22	Each
963-10-125	125ml, Squibs, Complete	#2	#22	Each
963-10-60	125ml, Squibs, Complete	#2	#16	Each

980-80-1165

Titration

Catalog No.	Type	Description	Pack
980-80-1165	Custom Titration	Suitable for Barnstead 116A	25

960-524-100



Ramsbottom Coking Bulb

Catalog No.	Description	Pack
960-524-100	D x H 25mm x 58mm	25

905-097-110



Pour Test Jar

Catalog No.	Type	Description	Pack
905-097-110	With an etched line around circumference 54mm from the inside bottom	119ml, For ASTM D97 & D2500	Each



910-445-025
910-445-050
910-445-075
910-445-100
910-445-150
910-445-200
910-445-300
910-445-350
910-445-400
910-445-450
910-445-500
910-445-600
910-445-650
910-445-700

Petrochemical Glassware

Method ASTM D445 Kinematic Viscosity of Transparent & Opaque Liquids

Viscometers for Cannon Fenske Routine

Catalog No.	Size	Viscosity range	Nominal Constant	Package
910-445-025	25	0.4-2	0.002	Each
910-445-050	50	0.8-4	0.004	Each
910-445-075	75	1.6-8	0.008	Each
910-445-100	100	3-15	0.015	Each
910-445-150	150	7-35	0.035	Each
910-445-200	200	20-100	0.1	Each
910-445-300	300	50-200	0.25	Each
910-445-350	350	100-500	0.5	Each
910-445-400	400	240-1,200	1.2	Each
910-445-450	450	500-2,500	2.5	Each
910-445-500	500	1,600-8,000	8.0	Each
910-445-600	600	4,000-20,000	20.0	Each
910-445-650	650	9,000-100,000	45.0	Each
910-445-700	700	20,000-100,00	100.0	Each



The Cannon Fenske Routine is the most widely used type of viscometer in the petroleum industry. It requires a minimum bath depth of 8 inches and a sample of 7mL. Each viscometer has a permanent serial number and is supplied with a calibration certificate indicating the constant of that tube at 40°C and 100°C. Recertification available.



920-445-025
920-445-050
920-445-075
920-445-100
920-445-150
920-445-200
920-445-300
920-445-350
920-445-400
920-445-450
920-445-500
920-445-600

Petrochemical Glassware

Method ASTM D445 Kinematic Viscosity of Transparent & Opaque Liquids

Viscometers for Cannon Fenske Opaque

Catalog No.	Type	Size	Viscosity range	Nominal Constant	Package
920-445-025	Reverse Flow	25	0.4-2	0.002	Each
920-445-050	Reverse Flow	50	0.8-4	0.004	Each
920-445-075	Reverse Flow	075	1.6-8	0.008	Each
920-445-100	Reverse Flow	100	3-15	0.015	Each
920-445-150	Reverse Flow	150	7-35	0.035	Each
920-445-200	Reverse Flow	200	20-100	0.1	Each
920-445-300	Reverse Flow	300	50-200	0.25	Each
920-445-350	Reverse Flow	350	100-500	0.5	Each
920-445-400	Reverse Flow	400	240-1,200	1.2	Each
920-445-450	Reverse Flow	450	500-2,500	2.5	Each
920-445-500	Reverse Flow	500	1,600-8,000	8	Each
920-445-600	Reverse Flow	600	4,000-20,000	20	Each



The Cannon Fenske Opaque is a popular reverse flow viscometer that has two separate timing bulbs allowing a check of results in the same test. It requires a minimum bath depth of 10 inches and a sample of 12mL. Each viscometer has a permanent serial number and is supplied with a calibration certificate indicating the constant of that tube at 40°C and 100°C. Recertification available.



Petrochemical Glassware

Method ASTM D445 Kinematic Viscosity of Transparent & Opaque Liquids

Ubbelohde Viscometers

Catalog No.	Size	Viscosity range	Nominal Constant	Package
960-445-100	0	0.3-1	0.001	Each
960-445-101	0C	0.6-3	0.003	Each
960-445-102	0B	1-5	0.005	Each
960-445-103	1	2-10	0.01	Each
960-445-104	1C	6-30	0.03	Each
960-445-105	1B	10-50	0.05	Each
960-445-106	2	20-100	0.1	Each
960-445-107	2C	60-300	0.3	Each
960-445-108	2B	100-500	0.5	Each
960-445-109	3	200-1,000	1	Each
960-445-110	3C	600-3,000	3	Each
960-445-111	3B	1,000-5,000	5	Each
960-445-112	4	2,000-10,000	10	Each
960-445-113	4C	6,000-30,000	30	Each
960-445-114	4B	10,000-50,000	50	Each
960-445-115	5	20,000-100,000	100	Each

The Ubbelohde constant does not change with the temperature, thereby making it a good choice for both high & low temperature measurements. It requires a bath depth of 10 inches and a sample of 11mL. Supplied calibrated with certificate. Recertification available.



930-445-004
930-445-005
930-445-006
930-445-007
930-445-008
930-445-009
930-445-010
930-445-011
930-445-012
930-445-013
930-445-014

Petrochemical Glassware

Method ASTM D445 Kinematic Viscosity of Transparent & Opaque Liquids

Viscometers for Cannon Manning Vacuum

Catalog No.	Size	Viscosity range	Nominal Constant		Pack
			Bulb B	Bulb C	
930-445-004	4	0.36-0.8	0.0002	0.0006	Each
930-445-005	5	0.12-2.4	0.006	0.002	Each
930-445-006	6	0.36-8	0.02	0.006	Each
930-445-007	7	1.2-24	0.06	0.02	Each
930-445-008	8	3.6-80	0.2	0.06	Each
930-445-009	9	12-240	0.6	0.2	Each
930-445-010	10	36-800	2.0	0.6	Each
930-445-011	11	120-240	6	2	Each
930-445-012	12	360-8,000	20	6	Each
930-445-013	13	1,200-24,000	60	20	Each
930-445-014	14	3,600-80,000	200	60	Each

The Cannon Manning Vacuum is used to measure absolute viscosity in poise of highly viscous materials. It requires a 300mm Hg vacuum to be applied to the small arm with a timing bulb. A sample of approximately 7mL is needed. Supplied calibrated with certificate. Recertification available.



940-445-025
940-445-050
940-445-100
940-445-200
940-445-400

Viscometers for Asphalt Institute

Catalog No.	Size	Viscosity range	Nominal Constant			Pack
			Bulb B	Bulb C	Bulb D	
940-445-025	25	42-800	2	1	0.7	Each
940-445-050	50	180-3,200	8	4	3	Each
940-445-100	100	600-12,800	32	16	10	Each
940-445-200	200	2,400-52,000	128	64	40	Each
940-445-400	400	9,600-200,000	500	250	160	Each

Asphalt Institute is similar to Cannon Manning Vacuum except a graduated capillary is used in place of two timing bulbs. A sample of approximately 4mL is needed. Supplied calibrated with certificate. Recertification available.



950-445-100
950-445-101
950-445-102
950-445-103
950-445-104
950-445-105
950-445-106
950-445-107
950-445-108
950-445-109

**Method ASTM D445
Kinematic Viscosity of
Transparent & Opaque
Liquids**

The Cross Arm viscometer is a reverse flow instrument that requires a small sample of approximately 3mL. It requires a bath depth of 10 inches. Supplied calibrated with certificate. Recertification available.



Petrochemical Glassware

Cross Arm Viscometers

Catalog No.	Size	Viscosity range	Nominal Constant	Package
950-445-100	1	0.6-3	0.003	Each
950-445-101	2	2-10	0.01	Each
950-445-102	3	6-30	0.03	Each
950-445-103	4	20-100	0.1	Each
950-445-104	5	60-300	0.3	Each
950-445-105	6	200-1,000	1	Each
950-445-106	7	600-3,000	3	Each
950-445-107	8	2,000-10,000	10	Each
950-445-108	9	6,000-30,000	30	Each
950-445-109	10	20,000-100,000	100	Each

Viscometer Accessories

Catalog No.	Description	Package
960-445-221	Plastic Viscometer Holder for Cannon Fenske Opaque /Routine	Each
960-445-232	Plastic Viscometer Holder for Ubbelohde	Each
960-445-243	Plastic Viscometer Holder for Cross Arm	Each
960-445-254	Neoprene Viscometer Holder for Cannon Fenske Opaque /Routine	Each
960-445-265	Neoprene Viscometer Holder for Cross Arm	Each
960-445-276	Neoprene Viscometer Holder for Cannon Manning Vacuum & Asphalt Institute	Each
960-445-278	Metal Dam holder for Cross Arm	Each
960-445-298	Metal Dam Holder for Cannon Manning Vacuum & Asphalt Institute	Each
960-445-210	Rubber Stoppers Taper 6mm-2mm for Ubbelohde	Each

960-445-221
960-445-232
960-445-243
960-445-254
960-445-265
960-445-276
960-445-278
960-445-298
960-445-210



**1320A
1440A**

AA/ICP Prep



Graphite Furnace Autosampler Cups

Features at a Glance:

- Sample cups are standard in size
- Suitable for Perkin Elmer and Shimadzu Autosampler
- Comparable to OEM products

Catalog No.	Type	Size	Capacity	Material	Description/ OEM#	Pack
1320A	Clarified Conical	13 x25 mm	1.5 -2-ml	Polypropylene	B3001566 B0119079	1000
1440A	Flat bottom	9.1 x23.6 mm	1.2 ml	Polypropylene	B0510397	1000

**2408T
2415T
3515TA-C**



Autosampler Tubes and Stoppers

Features at a Glance:

- Sample tubes suitable for diluters, ICP-MS, ICP-OES, FIA, Ion Chromatography (IC) and Mercury Analyzer Autosampler
- These standard sizes are ideal for both 60 and 90 position racks used by many manufacturers' Autosamplers including Cetac, Gilson, Iachat, Perkin Elmer, and Varian.
- Comparable to OEM products, ideal for other routine laboratory usage.

Catalog No.	Type	Capacity	Size	Material	Description/ OEM#	Pack
2408T	Round	8ml	13 x 100mm	Polypropylene	N0777156 B0508901	1200
2415T	Round	15 ml	17 x 100mm	Polypropylene	No777167	1200
3515TA-C	LDPE	for 17mm tube	17mm	Polypropylene	Stopper caps, blue	6000



PF-32-500
PF-40-500



AC-530
AC-533
AC-538
AC-550



AC-532
AC-535
AC-540



Pellet Film, Aluminum Cups

Pellet Film

Catalog No.	Type	Count Sheets	Diameter
PF-32-500	Pellet Film	500	1.26" (32mm)
PF-40-500	Pellet Film	500	1.57" (40mm)

Straight Wall Design

Catalog No.	Diameter X Depth	Packaging
AC-530	30mm x 8mm	1,000/Bag
AC-533	33mm x 8mm	1,000/Bag
AC-538	38.5mm x 9.5mm	600/Bag
AC-550	39.5mm x 7.5mm	600/Bag

Taper Wall Design

Catalog No.	Diameter X Depth	Packaging
AC-532	31mm x 7.9mm	1,000/Bag
AC-535	35mm x 7.9mm	1,000/Bag
AC-540	39.8mm x 9.2mm	600/Bag

Features at a Glance:

- Finest quality
- Thin wall material ensures minimal back pressure
- Resistance to accidental damage
- Easy to handle, label, and store



CD-6013
CD-6035
CD-6032
CD-6040

Die Sets and Replacement Pellets

- A complete Premier stainless steel Die Set includes a detachable main body, an integrated valve port (allowing to use a hose attachment line for evacuation of gases, volatiles and moisture during Pelletizing of sample), a base "O" ring for affecting a vacuum seal, a plunger, and 2 stainless steel pellets (polished on both sides).
- Premier Stainless Steel Die sets are manufactured of quality steel and can withstand load limits of up to 50 tons.
- Close tolerance machining allows Die Set to uniformly produce firm, durable XRF pellets.
- Premier Aluminum cups, both Taper and Straight wall are available and are used in conjunction with Die Set along with other commonly used dies & presses.

Press Pelletizing Die Sets

Catalog No.	Dimension	Description	Pellet produced
CD-6013	13mm	13mm Die Set	13mm
CD-6035	35mm	35mm Die Set	35mm
CD-6032	32 mm	32mm Die Set	32mm
CD-6040	40mm	40mm Die Set	40mm

Stainless Steel Replacement Pellets

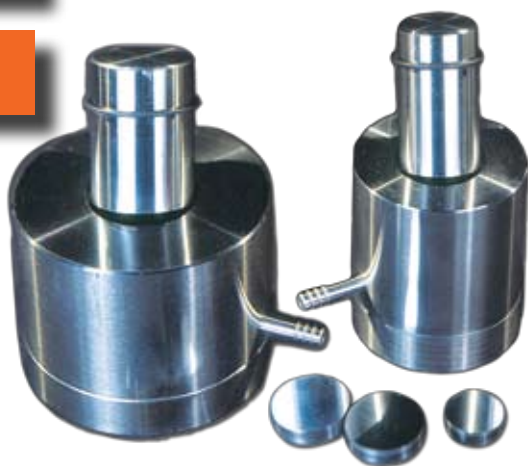
Catalog No.	Size	Description	Pellet Produced
SSP-6132	32mm	(2) Polished/ Pellets	32mm
SSP-6140	40mm	(2) Polished/ Pellets	40mm

Tungsten Carbide Replacement Pellets

Catalog No.	Size	Description	Pellet Produced
TC-7132	32mm	(2) Polished/ Pellets	32mm
TC-7140	40mm	(2) Polished/ Pellets	40mm

SSP-6132
SSP-6140

TC-7132
TC-7140



SV-1250

Polystyrene Mixing Vials

Polystyrene vials suitable for light duty grinding or mixing in a shaker mill.



Catalog No.	Dimension	Description
SV-1250	1" x 2.5" Dia. x Length (26mm x 66mm)	Polystyrene Mixing Vials (Includes Polypropylene Caps)

MB-120
MB-180
MB-316
MB-380

Plastic

Methyl Methacrylate

Our methyl methacrylate ball pestles are completely transparent and versatile. They show great resistance to breakage and can withstand high temperatures between 140-200°F, which make them ideal for light impact grinding and mixing with polystyrene vials.

Catalog No.	Nominal Diameter	Description	Package
MB-120	12 mm	Acrylic/Ball Pestle	100/Package
MB-180	3mm	Acrylic/Ball Pestle	100/Package
MB-316	5mm	Acrylic/Ball Pestle	100/Package
MB-380	9mm	Acrylic/Ball Pestle	100/Package



BA-300
BA-325
BA-350

Grinding & Binding Additives

PREMIER offers an extensive range of binding & grinding additives that are excellent for use in the preparation of reference samples for the clinker, iron ore, limestone, cement, raw metal, sand and steel industries, to name a few. All of our binding and grinding solutions have low absorption properties, are free of contaminants and employ exceptional binding elements.

- Bottles include protective tamper resistant neck band.



Boric Acid

- A select granular grade of boric acid material able to withstand extreme high temperatures incurring in the grinding process of very hard and inhomogeneous sample materials.
- Has moderate self-binding properties and a high level of grinding abrasiveness.
- Is available in powder form as well as in 0.25g and 0.5g tablets.

Catalog No.	Description	Package
BA-300	Powder	500 gram Bottle
BA-325	0.25 g tablets	1000 Tablets/Bottle
BA-350	0.5 g tablets	1500 Tablets/Bottle

BB-500



Brikett Blend

Catalog No.	Description	Package
BB-500	Powder	250 gram Bottle



CL-190
CL-192
CL-195

Grinding & Binding Additives

- Bottles include protective tamper resistant neck band.



Cellulose

- Low moisture Cellulose available in both low and high-density grades successfully utilized with homogenous Sample Materials that exhibit soft to moderate properties.
- Is ideal to be used as “Backing” for direct pressure pelletizing or for samples of minimal volume for strengthening purposes.
- Has good self-binding characteristics and can withstand moderate to high grinding cycles without degradation from heat.
- Is available both in powder and tablet formulation.
- Can be blended with sample at 10% by weight or used undiluted as sample matrix.

Catalog No.	Description	Package
CL-190	Powder	500 gram Bottle

Catalog No.	Description	Package
CL-192	0.25g tablets	500 Tablets/Bottle
CL-193	0.33g tablets	500 Tablets/Bottle
CL-195	0.50g tablets	500 Tablets/Bottle



PB-100
PB-125
PB-150
PB-200

Grinding & Binding Additives

- Bottles include protective tamper resistant neck band.



Pellet Blend

- A low-moisture (44μ) grinding formulation successfully utilized with samples that exhibit hard to abrasive characteristics.
- Has a well-balanced blend of self-binding properties, grinding abrasiveness and can withstand moderate to high grinding cycles without degradation from heat.
- May be blended with sample at 10% by weight or used undiluted as sample matrix.
- Available in powder form as well as in 0.25g, 0.5g and 1g tablets.

Catalog No.	Description	Package
PB-100	Powder	500 gram Bottle
PB-125	0.25 g tablets	500 Tablets/Bottle
PB-150	0.5 g tablets	500 Tablets/Bottle
PB-200	1 g tablets	500 Tablets/Bottle

PXR-200
PXR-225
PXR-250



Multi-Mix

- A low-moisture (<30μ) wax based select mixture.
- Successfully utilized with samples that exhibit moderate to hard properties.
- A highly lubricous additive, has excellent self-binding properties with adequate grinding abrasiveness during short to moderate grinding cycle without degradation from heat.
- May be blended with sample at 10% by weight or used undiluted as sample matrix.
- Available in powder form as well as in 0.25g and 0.5g tablets.

Catalog No.	Description	Package
PXR-200	Powder	500 gram Bottle
PXR-225	0.25 g tablets	500 Tablets/Bottle
PXR-250	0.50 g tablets	500 Tablets/Bottle



PR-25
PR-25-3887
PR-40-4387



PR-CD-BA32
PR-CD-BA40



Press Equipment, Pellet Tool

Press Equipment

Catalog No.	Dimension	Description
Striker Press E-MP-1500	W360 x D300mm;	Manual Hydraulic 15 Ton
Striker Press E-MP-1500	W360 x D300mm;	Manual Hydraulic 25 Ton
Striker Press E-APH-2500	W430 x D405mm;	Automatic Hydraulic 25 Ton
Striker Press E-APH-4000	W430 x D405mm;	Automatic Hydraulic 40 Ton
Striker Press E-APP-2500	W430 x D405mm;	Power Hydraulic 25 Ton

Pellet Tool

Catalog No.	Description	Pellet Produced
PR-CD-BA32	Press Pellet Filling Tool / Preparing Firm Backing for Samples as Pellets	32mm
PR-CD-BA40	Press Pellet Filling Tool / Preparing Firm Backing for Samples as Pellets	40mm

This filling tool is particularly ideal for small quantities of samples that utilize boric acid for backing. The tool allows the sample to be centered and ensures perfect placement into the die. A piston is included to pack and press the sample prior before adding boric acid to the top.



Platinum Labware Materials Information

The analytical laboratory is a vital part of all industrial plants and research facilities. The techniques employed therein have developed rapidly in recent years. However, the fundamentals upon which many of these techniques are based have remained constant, and the vast majority demand the use of high purity inert materials. In light of these demands, platinum's properties make it the ideal choice for laboratory ware. Platinum has a high degree of chemical inertness, even at the most extreme conditions, and yet can be re-fabricated into a wide variety of products utilized for sample preparation throughout many different industries.

Materials used for laboratory apparatus must have the following properties:

- High temperature strength
- High melting point
- Ductility
- Corrosion resistance
- Oxidation resistance.

Platinum and its alloys possess these qualities and is therefore the most widely used metal for analytical laboratory apparatus. Properties of platinum and some common platinum alloys are briefly discussed below.

Platinum (Pt) Platinum is the best known and least rare of the platinum group metals. Its high melting point (1769° Celsius), ductility and excellent resistance to chemical attack by acids and fusion mixtures make it very suitable for laboratory ware.

Platinum 5% Gold (Pt/Au) Universally accepted material of choice for crucible and casting molds for spectrographic analysis by x-ray fluorescence (XRF). The alloy has higher temperature strength than pure platinum and has a "non-wetting" property, which results in easy removal of the sample after fusion and allows for many reproducible assays.

Platinum 3.5% Rhodium (Pt/Rh) The rhodium alloys has higher hardness and temperature strength that make it suitable for more aggressive conditions.

Platinum 10% Rhodium (Pt/Rh) This alloy has melting point of 1850° Celsius along with greater hardness and higher strength than other platinum alloys. It is capable of maintaining its shape under the hottest furnace conditions.

Platinum Gold Rhodium (90/5/5) (Pt/Au/Rh) This alloy combines the "non-wetting" property of the Pt/Au alloy with the extra strength and durability of Pt/Rh alloys.

Other Metal

Gold (Au) Gold can be used in lab ware. Its most common application is for hydrofluoric acid treatment of siliceous materials.

Silver (Ag) Pure silver can be used with alkali hydroxides for fusion.



Platinum Labware Materials Information

Comparison of Properties	Pt	Pt-10Rh	Pt-5AU	Pt-3.5Rh	AU
Density g/cm ³	21.45	19.99	21.33	20.96	19.32
Melting Point °C	1770	1850	1660	1789	1064
Electrical Resistivity (0 °C) μΩ cm	9.85	18.40	18.50	15.63	2.06
Temp Coeff of Resistance (-100 °C) °C ⁻¹	0.0039	0.0017	0.0021	-	0.004
Annealed Hardness Hv	40	90	90	57	26
Ultimate Tensile Strength (20 °C) Nmm ⁻²	125	300	245	210	120
Tensile Elongation (20°C) %	40	35	24	34	42
Glass Wetting Resistance (Equilibrium Contact Angle of "E" Glass at 1200 °C)	26	45	83	-	-

Melting Temperatures of Low-Melting Precious Metal Alloys °C

Alloy	Pt	Au	Rh	Ir
B	825	1050	1131	1046
Si	830	370	1389	1470
P	588	935	1245	1262
Ag	597	665	-	-
Sn	1070	278	-	-
Sb	633	360	610	-
Pb	290	213	-	-
Bi	730	241	-	-
S	1240	-	925	-



Platinum Labware Materials Information

Material Properties and Possible Applications of Precious Metals and Alloys

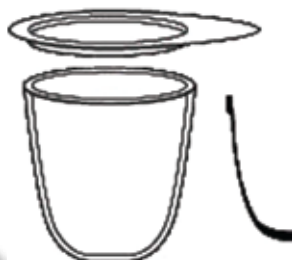
Material	Melting point or range °C	Material properties	Possible application
Pt	1769	High thermal and chemical stability. Platinum in various purities.	Laboratory apparatus such as crucibles and dishes which are only exposed to low mechanical stress
Pt-S	1769	Platinum containing metal oxide particles.	Laboratory apparatus with increased mechanical and thermal stability.
Pt-DPH PtAu 95/5-DPH PtRh 90/10-DPH	1769 1675-1745 1840-1870	The finely dispersed oxide particles in platinum and platinum alloys significantly increase the mechanical strength and corrosion resistance.	Crucibles and structural components which are subject to high mechanical stress at high temperatures.
PtIr 97/3 PtIr 90/10 Pt Ir 80/20	1772-1773 1780-1800 1830-1855	The mechanical strength, thermal and corrosion resistance become greater with increasing iridium content. Platinum-iridium alloys suffer from increased weight loss in oxidizing atmospheres.	Laboratory apparatus or structural components which are exposed to severe mechanical, thermal and corrosive effects
PtRh 90/10 PtRh 80/20	1840-1870 1870-1910	The mechanical strength, thermal and corrosion resistance become greater with increasing rhodium content. An advantage of the platinum-rhodium alloys is that only a minimal weight loss occurs even in oxidizing atmospheres.	Heavy-duty laboratory equipment, electrodes, glass fibre bushings and lining materials for components containing molten glass
PtAu 95/5	1675-1745	The gold content reduces the wetting by glass melts so that the glass can be easily removed after solidification without leaving any residue. The mechanical strength is also increased and the tendency to recrystallisation reduced.	These properties predestine PtAu 95/5 as the material for apparatus for the preparation of samples for x-ray fluorescence analysis (XRF)
Au/Pt 90/10	1120-1180	This gold alloy shows increased mechanical strength compared with pure gold and good resistance to phosphorus. Platinum based alloys are most susceptible to corrosion by phosphorus.	Dishes for flour ignition, sugar ignition, etc.
Ag Au	961 1063	Good conductivity, chemical stability (in particular, resistant to phosphorus).	Crucibles for reagents which corrode platinum alloys; contact materials.
Ir	2447	Iridium is the preferred material for oxide melts because of its good corrosion resistance and high temperature stability in inert atmospheres.	Crucibles for crystal growing. Components which are subject to severe thermal conditions.



PGCS2.5
PGCS5
PGCS8
PGCS10
PGCS15
PGCS20
PGCS25
PGCS30
PGCS35
PGCS40
PGCS50
PGCS60
PGCS70
PGCS80
PGCS90
PGCS100
PGCS110
PGCS120
PGCS150
PGCS200
PGCS250
PGCS700

Platinum Lab Ware Standard Form Crucibles

Catalog No.	Capacity (cc)	Depth (mm)	Diameter (mm)	Estimated Weight (g)				
				Standard form	Reinforced			Standard lid only
					rim only	base only	rim & base	
PGCS2.5	2.5	15	12	3	4	4	5	2
PGCS5	5	22	20	4	5	5	6	2
PGCS8	8	24	25	6	7	7	8	2
PGCS10	10	28	25	7	7.5	8	9	3
PGCS15	15	31	30	11	12	13	14	4
PGCS20	20	35	33	15	16	17	18	5
PGCS25	25	34	36	19	20	21	23	5
PGCS30	30	36	40	22	24	26	27	7
PGCS35	35	38	41	25	26	27	32	7
PGCS40	40	42	42	30	32	34	36	7
PGCS50	50	44	45	38	40	42	45	8
PGCS60	60	47	45	46	48	50	54	9
PGCS70	70	53	49	50	52	54	63	12
PGCS80	80	53	51	51	54	63	72	14
PGCS90	90	57	54	52	59	71	81	15
PGCS100	100	57	56	59	68	73	90	17
PGCS110	110	60	56	68	71	81	95	19
PGCS120	120	66	64	84	88	90	98	22
PGCS150	150	69	65	100	104	107	114	27
PGCS200	200	65	80	150	159	165	180	30
PGCS250	250	73	81	175	179	183	190	32
PGCS700	700	105	105	300	305	315	320	50



- Available Capacity 2.5-700ml (larger sizes made to order)
- Options: Lids, reinforced rims and/or base

Reinforcement of the rim gives the crucible a more robust character enabling regular handling and reducing rim deformation



PGCL-8
PGCL-10
PGCL-15
PGCL-20
PGCL-25
PGCL-30
PGCL-35
PGCL-40
PGCL-50
PGCL-60
PGCL-70
PGCL-75
PGCL-80
PGCL-90
PGCL-100
PGCL-110
PGCL-120
PGCL-125

Platinum Labware Low Form Crucibles

Catalog No.	Capacity (cc)	Diameter (mm)	Depth (mm)	Estimated Weight (g)				
				Standard form	rim only	base only	rim & base	Standard lid only
PGCL-8	8	25	21	6	7	7	8	2
PGCL-10	10	27	23	7	8	8	9	3
PGCL-15	15	30	27	11	12	13	14	4
PGCL-20	20	33	28	15	16	17	18	5
PGCL-25	25	36	30	19	20	21	23	5
PGCL-30	30	40	32	22	24	26	27	7
PGCL-35	35	42	33	25	26	27	32	7
PGCL-40	40	43	34	30	32	34	36	7
PGCL-50	50	46	37	38	40	42	45	8
PGCL-60	60	48	39	46	48	50	54	9
PGCL-70	70	52	41	50	52	54	63	12
PGCL-75	75	52	44	50	53	58	67	13
PGCL-80	80	52	47	51	54	63	72	14
PGCL-90	90	57	48	52	59	71	81	15
PGCL-100	100	57	51	59	68	73	90	17
PGCL-110	110	57	54	68	71	81	95	19
PGCL-120	120	57	57	84	88	90	98	22
PGCL-125	125	58	59	97	101	105	114	25



- Available Capacity 8-125ml (larger sizes made to order)
- Options: Lids, reinforced rims and/or base.

Reinforcement of the rim gives the crucible a more robust character enabling regular handling and reducing rim deformation.



PGD20
PGD25
PGD35
PGD40
PGD50
PGD60
PGD75
PGD100
PGD125
PGD150
PGD175
PGD200
PGD250
PGD300
PGD400
PGD500
PGD750

Platinum Labware Evaporating Dishes

Flat Bottom Dish

Catalog No.	Capacity (cc)	Depth (mm)	Diameter (mm)	Estimated weight (g)				
				Standard form	Reinforced			Standard lid only
					Base only	Rim & base	Rim only	
PGD20	20	20	41	6	8	9	7	6
PGD25	25	23	42	8	10	12	9	10
PGD35	35	25	49	12	14	16	13	13
PGD40	40	26	51	15	18	20	17	14
PGD50	50	29	53	17	21	25	19	15
PGD60	60	30	58	20	23	27	21	19
PGD75	75	30	65	25	30	33	27	22
PGD100	100	33	70	33	37	40	35	25
PGD125	125	34	74	42	45	48	44	28
PGD150	150	41	77	50	55	60	53	33
PGD175	175	40	84	55	64	68	59	41
PGD200	200	43	90	67	75	80	71	44
PGD250	250	42	94	80	83	88	82	51
PGD300	300	45	110	94	100	105	98	55
PGD400	400	48	118	133	140	148	137	58
PGD500	500	50	124	170	185	200	179	61
PGD750	750	75	124	270	310	350	290	61



- Evaporating dishes may be ordered also with reinforced rim and heavy base. The additional cost for reinforcement is far outweighed by longer life and ease of handling.
- If covers are required, please specify.



PGED55
PGED80
PGED100
PGED125
PGED150

All are offered in:

Pure platinum
Pt/Au alloy 95/5
Pt/Rh alloy 97/3
Pt/Rh alloy 90/10
Pt/Au/Rh alloy 90/5/5



PGMD13
PGMD30
PGMD45



PFA13
PFA17



PWD75A
PWD75B



Platinum Labware Evaporating Dishes

Evaporation Dish

Catalog No.	Capacity (cc)	Depth (mm)	Diameter (mm)	Weight (g)
PGED55	55	22	59	28
PGED80	80	30	59	32
PGED100	100	28	67	40
PGED125	125	32	69	42
PGED150	150	40	69	50

Milk Analyses Dish

Catalog No.	Capacity (cc)	Depth (mm)	Diameter base (mm)	Diameter top (mm)	Weight (g)
PGMD13	13	12	32	42	12
PGMD30	30	17	40	50	16
PGMD45	45	25	40	55	22

Flour Ashing Dish

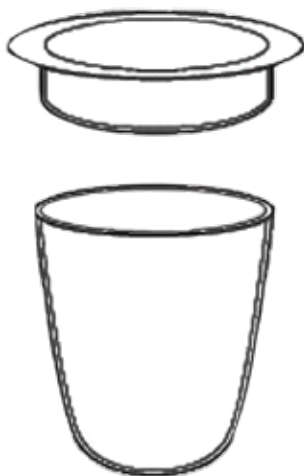
Catalog No.	Capacity (cc)	Depth (mm)	Diameter Top (mm)	Diameter Base (mm)	Weight (g)
PFA13	13	12	42	32	12
PFA20	20	17	46-47	32	16

Wine Dish

Catalog No.	Capacity (cc)	Type	Diameter Base (mm)	H (mm)	Weight (g)	
					Standard	Reinforced
PWD75A	75	no lip	85	20	22	27
PWD75B	75	with lip	85	20	22	27



PGVM10
PGVM15
PGVM20
PGVM25
PGVM30
PGVM40
PGVM50

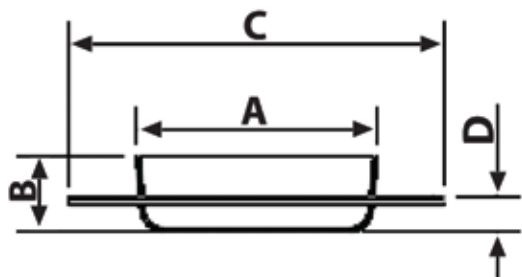


Platinum Labware Volatile Matter & Loss On Ignition Crucibles

Volatile Matter Crucibles

Catalog No.	Capacity (cc)	Diameter (mm)	Depth (mm)	Crucible weight (g)	Flanged cover weight (g)
PGVM10	10	25	28	7	6
PGVM15	15	31	31	11	8
PGVM20	20	33	35	15	9
PGVM25	25	36	35	19	10
PGVM30	30	40	36	22	11
PGVM40	40	42	42	30	13
PGVM50	50	45	44	38	14

PFAC8



Loss On Ignition Crucibles (LOI)

Catalog No.	A mm	B mm	C mm	D mm	Weight (g)
PFAC8	32	10	50	4.5	70 with lid

All are offered in:

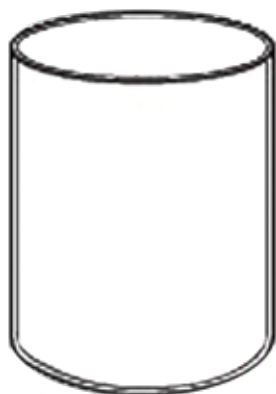
- Pure platinum
- Pt/Au alloy 95/5
- Pt/Rh alloy 97/3
- Pt/Rh alloy 90/10
- Pt/Au/Rh alloy 90/5/5



**PGB110
PGB220A
PGB220B**

Platinum Labware Beakers, Capsules, Fuel Cup

Beakers are ideal for holding and handling large quantities of corrosive liquids. They can be furnished with reinforced rims and lips, and a pouring spout if required. Custom sizes may be available upon request.



Beakers

Catalog No.	Capacity (cc)	Depth (mm)	Overall Diam (mm)	Weight (g)
PGB110	110	70	45	170
PGB220A	220	60	68	200
PGB220B	220	80	59	230

**PGCK-8
PGCK-16
PGCK-19**



Capsules - Kawin Form

Catalog No.	Capacity (cc)	Depth (mm)	Diam base (mm)	Diam top (mm)	Weight (g)
PGCK-8	8	15	20	28	9
PGCK-16	16	30	20	33	23
PGCK-19	19	35	20	34	25

PGFC-5



Fuel Cup

Catalog No.	Capacity (cc)	Depth (mm)	Diameter (mm)	Weight (g)
PGFC-5	5	12	27	11



PGSB-01
PGSB-02
PGSB-03

Platinum Labware Boats, Foil/Perforated Sheets

We offer a selection of boats in a wide range of weights and dimensions including microanalysis for various techniques that are performed on small quantities of sample materials to allow use of the traditional methods.

Many types of boats have been devised, but only our standard form boats are shown. We will however, manufacture virtually any custom type boats to user's specifications.



Standard Form Boats

Catalog No.	Depth (mm)	Length (mm)	Weight (g)	Width (mm)
PGSB-01	9.5	38-102	3-12	12.7
PGSB-02	9.5	151	30	12.7
PGSB-03	9.5	76	31	15.9



Foil/Perforated sheets

Manufactured to customers specifications

Feature at a Glance:

- Available in Platinum, Platinum Alloys and Iridium, Gold and Palladium
- Standard Thickness from 0.001" to 0.25" (0.0254mm-6.35mm)



PMIL-545-41
PMIL-575-41
PMIL-545-51
PMIL-575-91

Platinum Labware Loops, Sample Carriers

Materials & Features at a Glance

- Platinum or Pt with 3.5 Rh
- Precious Metal Loops are utilized for sampling
- PMIL-575-91 loops are breed loops utilized for milk analysis
- When ordering, please specify number, alloy, item, minimum quantities may apply

Loops (minimum order of 5)

Catalog No.	Loop ID (mm)	Shank length (mm)	Weight (g)	Wire D (mm)
PMIL-545-41	3	45	0.16	0.41
PMIL-575-41	1.45	75	0.21	0.41
PMIL-545-51	5	45	0.28	0.51
PMIL-575-91	4	75	1.3	0.91

Care and Calibration

All inoculating loops have fused joints and are accurately sized. Proper laboratory procedures dictate, however, that they be calibrated prior to use. Calibration is easily accomplished with a beaker of water and a calibrated capillary pipette. Cleaning of loops should be done each time they are utilized in a sample preparation phase. A solution of hydrochloric acid and water may be utilized to effectively clean the loop.



Sample Carriers

Primarily utilized in combustion testing to hold the sample in place

Styles at a Glance:

- OGG
- Schoniger



E-1608
E-1611
E-1612
E-1607
E-1606
E-1613

Platinum Labware Electrodes



Electrodes

Catalog No.	Cyl. diameter (mm)	Cyl. height (mm)	Overall height (mm)	Stem diameter (mm)	Weight (g)
E-1608	41/35	51/7.8	127/178	1.6/1.0	25/12
E-1611	51	57	140	1.6	40/24
E-1612	25	51	140	1.6	25/18
E-1607	25	51	152	1.3	19/11
E-1606	10	35	120	1.5	6
E-1613	12.7	50.8	127	1.63	15

Typically utilized in electro-analysis applications

All are offered in:

Frame is Pt/Ir 3%
Mesh is 100% Pt

Features at a Glance:

- We can manufacture to user's own specifications
- For added strength stems are made of Platinum/Iridium alloy
- Mesh is made from Platinum
- Joints of frame are reinforced to ensure durability



Platinum Labware Rodes, Wire, Pan Kits

Wire and Rods



The uses of platinum and platinum alloy wires and rods are wide and varied. Due to its strength and high corrosion resistance platinum wire is used in a broad range of industries including aerospace and medical industries.

Wire Sizes: from 0.003" (40 gauge) to 0.050" (16 gauge)

Rods sizes: from 0.050" (16 gauge) to 0.250" (2gauge)

Available Alloys:

- Pure Platinum is supplied in two grades: Reference Grade, which is 99.99% pure, and Commercial Grade, which is 99.95% pure
- Platinum-Iridium; 80/20
- Platinum-Rhodium; 90/10
- Platinum-Rhodium; 90/20
- Palladium
- Gold



Pan Kits

Pan Kits are utilized in conjunction with DSC, STA and TGA instruments for high temperature applications. We manufacture to customer's specifications.

Pans with cradle - minimum order quantity is 10;

Pans without cradle - minimum order quantity is 20.



Platinum Labware Crystal Growing Crucibles



Crystal growth involves a variety of research fields ranging from surface physics, crystallography, and material sciences to condenser matter physics.

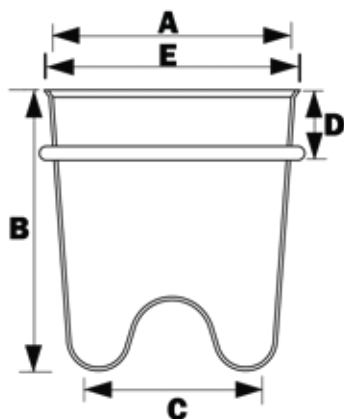
Only non alloy, pure materials are utilized in this technique. Cylindrical and conical crucibles are available in various weights and dimensions in Platinum, Iridium, Gold and Rhenium. Inquire for further details.



PF-FC1
PF-FM2
PF-FM5
PF-FM8

Fusion Labware

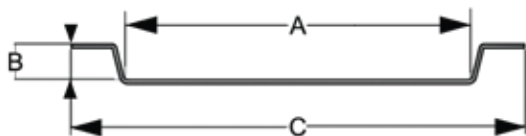
Spectroscopic analysis is becoming an increasingly valued tool in the modern laboratory. The Fusion Method is widely practiced to prepare a vast range of samples for analysis utilizing (XRF) X-Ray Fluorescence, (AA) Atomic Absorption, (ICP) Inductive Coupled Plasma-Atomic Emission as well as a variety of classical chemical techniques including Wet Chemistry. The sample types include oxides, sulfides, and silicates that comprise many of the ores and concentrates in the Cement, Mining and Metallurgical Industries. The Fusion Method requires samples to be dissolved and mixed into lithium borate flux at typical temperatures ranging from 700 to 1250 degrees Celsius. The molten sample is poured into preheated molds or casting dishes then cooled. Precise controls of cooling are essential to producing flat surface beads and avoid cracking or crystallization conditions.



Fusomatic-15

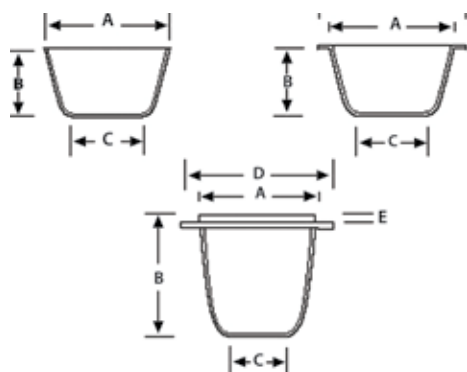
Catalog No.	Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (g)
PF-FC1	Crucible	35	40	21	11	38	30

Catalog No.	Mold type	A (mm)	B (mm)	C (mm)	Weight LD	Weight MD	Weight HD
PF-FM2	32mm	32.0-34.0	4	49	60g	80g	100g
PF-FM5	38mm	37.0-39.0	4	49	60g	80g	100g
PF-FM8	40mm	39.0-40.0	4	49	60g	80g	100g



PFHC1
PFHC2
PFHC3
PFHC4

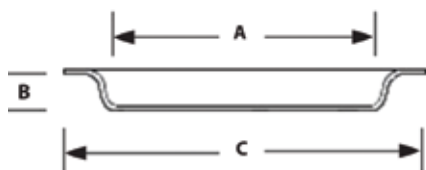
Fusion Labware



Herzog®

Catalog No.	Type	A (mm)	B (mm)	C (mm)	D (mm)	Weight (g)
PFHC1	Crucible	49	30	37	-	90
PFHC2	Crucible	49	30	40	56	110
PFHC3	Crucible	36	36.5	22	44	40
PFHC4	Crucible	36	38.5	22	44	40

PFHM1
PFHM2
PFHM3
PFHM4
PFHM5

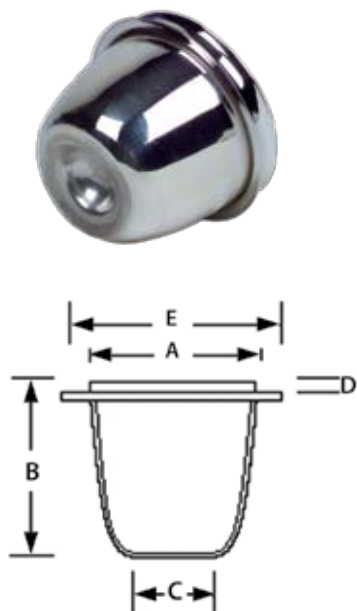


Catalog No.	Type	A (mm)	B (mm)	C (mm)	Weight (g)
PFHM1	Dish	29/31	3	44	40
PFHM2	Dish	38/41	3	52	100
PFHM3	Dish	37/41	4	52	50
PFHM4	Dish	39/41	4	50	120
PFHM5	Dish	32/34	3.5	44	60



PFCC1
PFCC2
PFCC3
PFCC4
PFCC5
PFCC8

Fusion Labware



Claisse®

Catalog No.	Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (g)
PFCC1	Crucible Dimple	37	32	20	5	43	26
PFCC2	Crucible Dimple	37	32	20	5	43	30
PFCC3	Crucible Flat base	33	35	17	3.5	40	21
PFCC4	Crucible Flat base	35	35	21	3.5	44	26
PFCC5	Flat base w/dimples	37	32	26	5	43	30
PFCC8	Crucible Flat base	35	35	22	3	43	60

PFCM1
PFCM2
PFCM3
PFCM4
PFCM5
PFCM6
PFCM7
PFCM8



All are offered in:

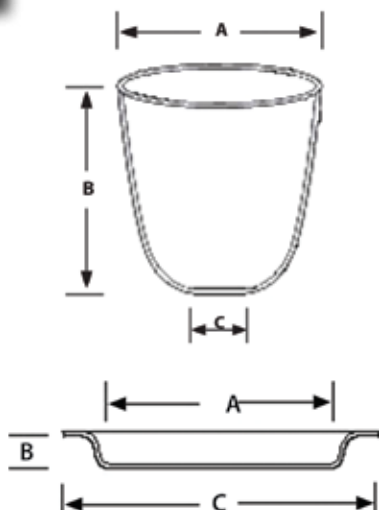
Pure platinum
Pt/Au alloy 95/5
Pt/Rh alloy 97/3
Pt/Rh alloy 90/10
Pt/Au/Rh alloy 90/5/5

Catalog No.	Type	A (mm)	B (mm)	C (mm)	Weight (g)
PFCM1	Mold	30/31	6	39	18 or 30
PFCM2	Mold	31/33	6	41	19 or 32
PFCM3	Mold	32/34	6	41	21 or 36
PFCM4	Mold	32/38	6	45	22 or 36
PFCM5	Mold	35/37	6	44	25 or 48
PFCM6	Mold	38/41	6	49	29 or 48
PFCM7	Mold	40/42	6	49	34 or 48
PFCM8	Mold	37/40	6	49	28 or 48



PFBC2
PFBC3
PFBC4
PFBM1
PFBM2
PFBM3

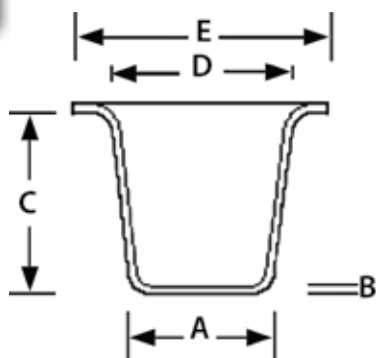
Fusion Labware



Initiative Scientific ®

Catalog No.	Type	A (mm)	B (mm)	C (mm)	Weight (g)
PFBC2	Crucible	34.5	36	26	30
PFBC3	Crucible	40	39	26	35
PFBC4	Crucible	33	34	18	35
PFBM1	Mold	32/34	3	49	60-100
PFBM2	Mold	38/40	3	54	60-100
PFBM3	Mold	39/41	3	54	60-100

PFBM5
PFBM6
PFBM7
PFBM8

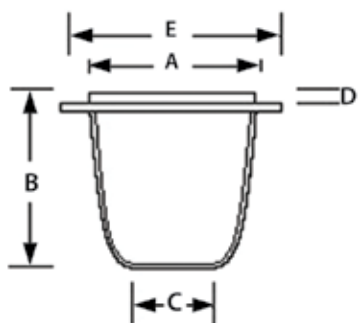


Catalog No.	Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (g)
PFBM5	Moldable	39/41	3	30	45	55	150
PFBM6	Moldable	40-42	3	30	45	55	150
PFBM7	Moldable	32/34	6	30	40	49	100
PFBM8	Moldable	32/34	3	30	40	49	100



PFLC1
PFLC2
PFLC3

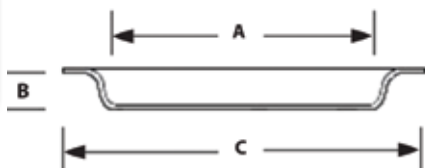
Fusion Labware



Leco®

Catalog No.	Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (g)
PFLC1	Crucible	37	35	20	5	44	45
PFLC2	Crucible	35	38	21	5	44	45
PFLC3	Crucible	37	35	30	5	44	45

PFLM1
PFLM2
PFLM3
PFLM4



Catalog No.	Type	A (mm)	B (mm)	C (mm)	Weight (g)
PFLM1	Mold	35/36	7.2	44	45
PFLM2	Mold	35/38.5	7.2	44	45
PFLM3	Mold	39/41	4.2	47	40
PFLM4	Mold	39/41	5	52	40

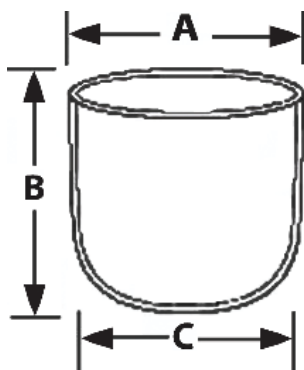
All are offered in:

Pure platinum
Pt/Au alloy 95/5
Pt/Rh alloy 97/3
Pt/Rh alloy 90/10
Pt/Au/Rh alloy 90/5/5



PFKC1

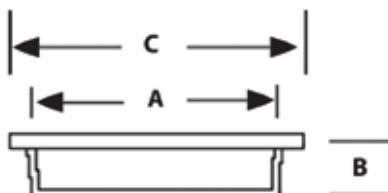
Fusion Labware



Katanax ®

Catalog No.	Type	A (mm)	B (mm)	C (mm)	Weight (g)
PFKC1	Crucible	40	32	32	26 or 30

PFKM1
PFKM2
PFKM3
PFKM4
PFKM5
PFKM6
PFKM7
PFKM8



Catalog No.	Type	A (mm)	B (mm)	C (mm)	Weight (g)
PFKM1	Mold	30/31	6	39	18 or 30
PFKM2	Mold	31/33	6	41	19 or 32
PFKM3	Mold	32/34	6	41	21 or 36
PFKM4	Mold	32/38	6	45	26 or 36
PFKM5	Mold	35/37	6	44	25 or 48
PFKM6	Mold	38/41	6	49	29 or 48
PFKM7	Mold	40/42	6	49	34 or 48
PFKM8	Mold	37/40	6	49	28 or 48

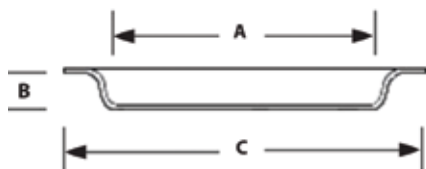


PFXM6
PFXM7
PFXM8
PFXM9
PFXM10
PFXM11
PFXM12
PFXM13
PFXM14
PFXM15
PFXM27

Fusion Labware

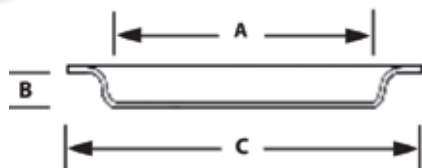
Multi-purpose

Catalog No.	Type	A (mm)	B (mm)	C (mm)	Weight (g)
PFXM6	Pressed	29/31	3	42	45-100
PFXM7	Pressed	30/32	2.4	42	45-100
PFXM8	Pressed	30/32	3	42	45-100
PFXM9	Pressed	30/32	4	42	50-100
PFXM10	Pressed	32/34	3	46	50-100
PFXM11	Pressed	33/34	2.4	46	50-100
PFXM12	Pressed	38/40	3	52	60-100
PFXM13	Pressed	38/40	4.5	52	60-100
PFXM14	Pressed	39/41	3	52	60-100
PFXM15	Pressed	39/41	4	52	80-100
PFXM27	Pressed	36/38	3	55	60-100



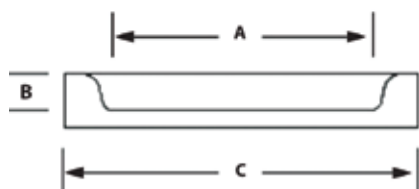
PFXM1
PFXM2
PFXM3
PFXM4
PFXM5
PFXM28
PFXMD1
PFXMD3
PFXMD5
PFXMD7
PFXMD9
PFXMD10
PFXMD11

Catalog No.	Type	A (mm)	B (mm)	C (mm)	Weight (g)
PFXM1	Spun	29/31	5	42	20-40
PFXM2	Spun	30/31	6	37	20-40
PFXM3	Spun	38-40	3.5	52	30-50
PFXM4	Spun	38/40	8	48	30-50
PFXM5	Spun	39/41	5	52	30-50
PFXM28	Spun	36/38	3	55	30-50
PFXMD1	Spun	29/31	6	42	40
PFXMD3	Spun	30/32	6	42	40
PFXMD5	Spun	32/34	6	48	50
PFXMD7	Spun	35/37	6	48	50
PFXMD9	Spun	38/40	5	52	60
PFXMD10	Spun	39/41	5	52	60
PFXMD11	Spun	39/41	6	52	60



PFXM16
PFXM17
PFXM18
PFXM19
PFXM20
PFXM21
PFXM22
PFXM23
PFXM24
PFXM25
PFXM26

Fusion Labware



All are offered in:

Pure platinum
Pt/Au alloy 95/5
Pt/Rh alloy 97/3
Pt/Rh alloy 90/10
Pt/Au/Rh alloy 90/5/5

Multi-purpose

Catalog No.	Type	A (mm)	B (mm)	C (mm)	Weight (g)
PFXM16	Mold furnace	30/32	2.5	33	40-100
PFXM17	Mold furnace	30/32	2.5	39	80-100
PFXM18	Mold furnace	30/32	3	40	80-100
PFXM19	Mold furnace	32/35	2	39	80-100
PFXM20	Mold furnace	33/35	2.5	37	80-100
PFXM21	Mold furnace	33/35	2.5	39	80-100
PFXM22	Mold furnace	38/40	2.5	44	100
PFXM23	Mold furnace	39/41	2	44	100
PFXM24	Mold furnace	39/41	2.5	44	100
PFXM25	Mold furnace	39/41	3	44	100
PFXM26	Mold furnace	39/41	3.5	44	100



PFTC1
PFTC2
PFTM1

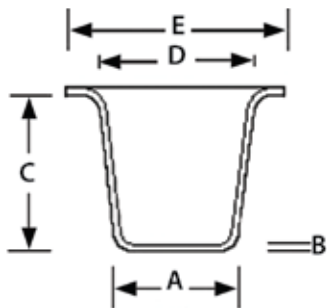
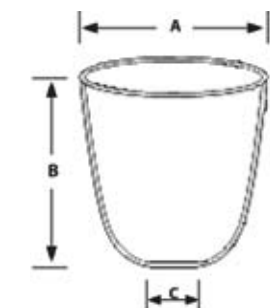
Fusion Labware

Modutemp Fusion Furnaces

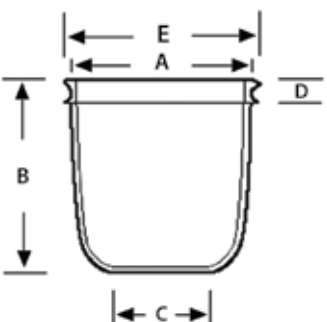
Catalog No.	Type	A (mm)	B (mm)	C (mm)	Weight (g)
PFTC1	Crucible	36	35	18	30
PFTC2	Crucible	36	40	18	30
PFTM1	Mold	39/41	3	50	60-100

PFTG1

PFSC1
PFSC2
PFSC3
PFSC4



Catalog No.	Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (g)
PFTG1	Moldable	39/41	3	30	45	56	130



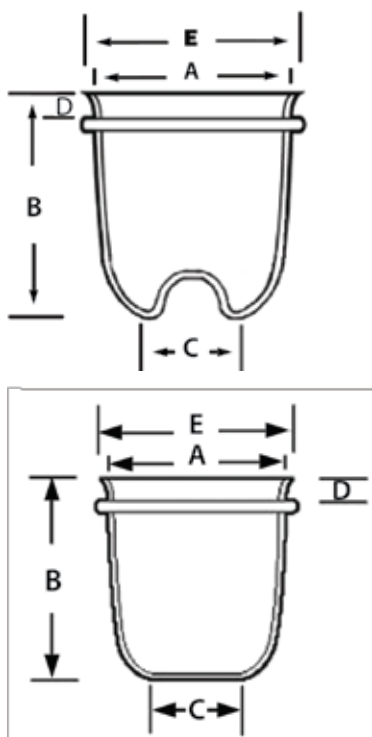
Schoeps

Catalog No.	Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (g)
PFSC1	Crucible 3 pin ring	35	38	20	Pin length 60	-	50
PFSC2	Crucible 3 pin ring	44	38	26	60	-	50
PFSC3	Crucible 3 pin ring	39	43	22	60	-	38
PFSC4	Crucible rolled lip	33	38	22	7	39	40



**PFEC2
PFEC3**

Fusion Labware



Eagon® 2

Catalog No.	Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (g)
PFEC2	Crucible Dimple	32.5	37	20	8	37.5	40
PFEC3	Crucible Flat Base	32.5	37	20	8	37.5	40

**PFEM3
PFEM11**

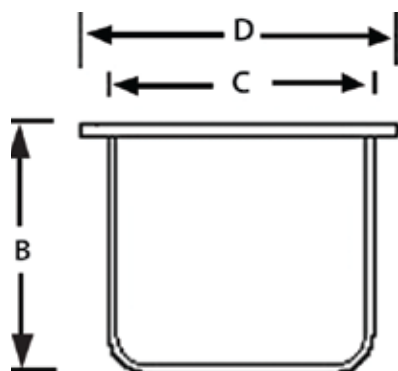


Catalog No.	Type	A (mm)	B (mm)	C (mm)	Weight (g)
PFEM3	Mold	31.5-32.5	3.5	50	40-80
PFEM11	Mold	39.5-40.5	3.5	56	60-100



PFPC1
PFPC2
PFPC3
PFPC4
PFPC5

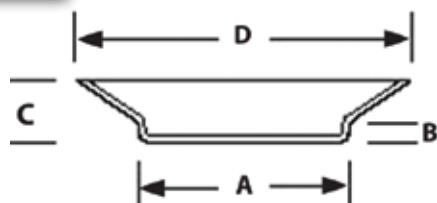
Fusion Labware



Perl'x

Catalog No.	Type	A (mm)	B (mm)	C (mm)	D (mm)	Weight (g)
PFPC1	Crucible	41	40	41	49	116
PFPC2	Crucible	41	40	41	49	80
PFPC3	Crucible	44	40	44	52	90
PFPC4	Crucible	38	40	42	50	75
PFPC5	Crucible	28	40	38	50	70

PFPM1
PFPM2
PFPM3
PFPM4
PFPM5
PFPM6
PFPM7

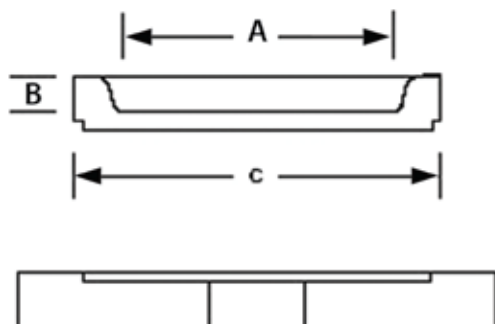


Catalog No.	Type	A (mm)	B (mm)	C (mm)	D (mm)	Weight (g)
PFPM1	Mold	30/32	3	5	55	25
PFPM2	Mold	30/32	3	5	55	40
PFPM3	Mold	30/32	3.5	11.5	65	50
PFPM4	Mold	39.5/40.5	3.5	11.5	65	58
PFPM5	Mold	35.5/36.5	3.5	11.5	65	50
PFPM6	Mold	35.5/36.5	3	5	55	50
PFPM7	Mold	39.5/40.5	3	11.5	65	58



**PFAM9
PFAMH10**

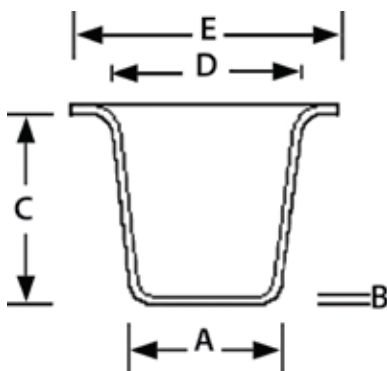
Fusion Labware



Phoenix

Catalog No.	Type	A (mm)	B (mm)	C (mm)	Weight (g)
PFAM9	Mold furnace type& plate	39/41	3.5	44	93
PFAMH10	Mold furnace type& plate	41.5	-	54	27

**PFAM10
PFAM11
PFAC10
PFAC11**

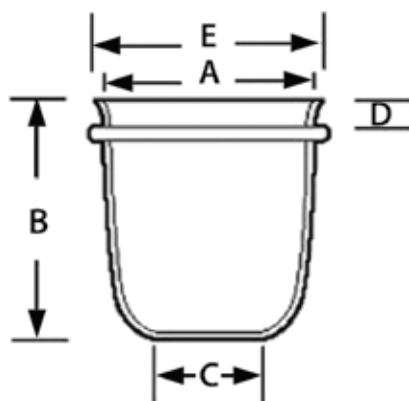


Catalog No.	Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (g)
PFAM10	Moldable	39/41	3	25	44	56	80-150
PFAM11	Moldable	29/31	3	25	44	56	80-150
PFAC10	Solution (ICP-AES)	17	-	18	27	34	15
PFAC11	Solution (ICP-AES)	35	-	45	50	55	50



PFAC1
PFAC2
PFAC3
PFAC4
PFAC5
PFAC6
PFAC7

Fusion Labware



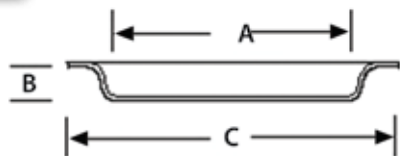
Phoenix

Catalog No.	Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (g)
PFAC1	Crucible ring	32	36	20	8	37.5	40
PFAC2	Crucible ring	32	43	20	12	37.5	40
PFAC3	Crucible ring	34	36.5	20	9	40	40
PFAC4	Crucible rolled lip	33	38	21	7	39	40
PFAC5	Crucible rolled lip	33	30	20	7	38	30
PFAC6	Crucible rolled lip	40	35	22	4	50	36
PFAC7	Crucible rolled lip	33	41	21	9	39	40

PFAM1
PFAM2
PFAM3
PFAM4
PFAM5
PFAM6
PFAM6.4
PFAM7
PFAM7.5
PFAM8
PFAM12
PFAM13

All are offered in:

Pure platinum
Pt/Au alloy 95/5
Pt/Rh alloy 97/3
Pt/Rh alloy 90/10
Pt/Au/Rh alloy 90/5/5

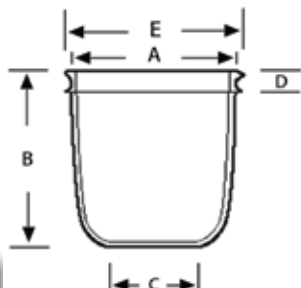


Catalog No.	Type	A (mm)	B (mm)	C (mm)	Weight (g)
PFAM1	Mold	29/31	3	42	60-100
PFAM2	Mold	30/32	3	42	60-100
PFAM3	Mold	30/32	4	42	60-100
PFAM4	Mold	30/32	3	46	60-100
PFAM5	Mold	32/24	3	46	60-100
PFAM6	Mold	33/35	3	46	60-100
PFAM6.4	Mold	33/35	4	46	60-100
PFAM7	Mold	39/41	4.2	52	60-100
PFAM7.5	Mold	39/41	5	52	60-100
PFAM8	Mold	39/41	3	56	60-100
PFAM12	Mold	34/36	3	55	60-100
PFAM13	Mold	38/40	4	52	60-100



FFSC4

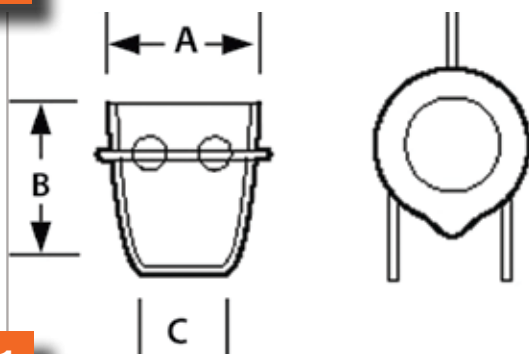
Fusion Labware



Vulcan

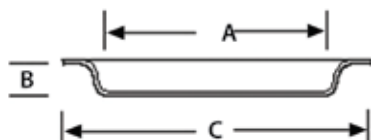
Catalog No.	Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (g)
PFSC4	Crucible rolled lip	33	38	22	7	39	40

**PFSC1
PFSC2
PFSC3**



Catalog No.	Type	A (mm)	B (mm)	C (mm)	Pin length (mm)	Weight (g)
PFSC1	Crucible 3 pin	35	38	20	60	31
PFSC2	Crucible 3 pin	44	38	26	60	50
PFSC3	Crucible 3 pin	39	43	22	60	38

**PFSM1
PFSM2
PFSM3
PFSM4
PFSM5**



Catalog No.	Type	A (mm)	B (mm)	C (mm)	Weight (g)
PFSM1	Mold	29/31	3	41	27
PFSM2	Mold	30/32	3	41	29
PFSM3	Mold	32/34	3	41	31
PFSM4	Mold	34/36	3	51	45
PFSM5	Mold	39/41	3	51	45



Platinum Labware Services

Cleaning & Polishing

Send us your platinum labware for professional cleaning & polishing!
We will complete it the same day we receive it.

PREMIER provides customers with cleaning, polishing and metal repair services. Our services apply to most fusion crucibles, molds and various other platinum labware items. Minorly damaged platinum/gold labware items can be professionally reshaped, repaired, cleaned and polished, all at a reasonable cost and with fast turnaround time.

Simply pack up your labware, include a note in the box, and send it to:

PREMIER Lab Supply, Inc.
691 NW Enterprise Drive
Port St. Lucie, Florida 34986
Attn: Service Department/Lab Ware items

or E-mail us at service@premierlabsupply.com to advise us that your items are on the way.

* Note: PLS recommends you add insurance on shipment packages.

Metal Engraving

PREMIER offers a unique metal engraving service to assist customers in keeping track of and managing their platinum labware items.

These markings are double sided, bold font and large enough for users to identify from a short distance, making it easier to select and use labware. In addition, numeric markings can help keep track of your platinum labware and ensure appropriate inventory levels. Please e-mail us to add this engraving service to your next platinum lab order.

Be sure to include the numbers or letters you'd like engraved!



Platinum Labware Use and Care

Use & Care of Platinum Labware

Platinum (Pt) and many of its alloys are highly resistant to chemical attack. To get the greatest use and life out of your Pt ware you should observe the following:

- Avoid thermal and physical shock.
- Cleaning: For routine operation, place the Pt labware into a beaker of hot citric acid solution (concentration and temperature to suit). For a quick dry crucible clean, place about 1gm of lithium borate into the crucible, melt, place a grain of ammonium iodide and pour the melt to waste.

Other cleaning operations include:

Boiling with dilute hydrochloric acid (HCl) or fusing with potassium bisulphate prior to boiling with water normally suffices. There are procedures set out for specific material types in various standards e.g. ISO 9516 - 1992 for fusion XRF analysis of iron ores.

For a more aggressive clean, boil in nitric acid (HNO₃ chlorine free).

Whatever cleaning method is used, rinse thoroughly with clean water and dry thoroughly.

- Polish and reshape your Pt ware after use.
- Always maintain oxidizing condition.
- When performing borate fusion on reducible matter, pre-oxidize first before fusing. In most cases, this can be done in situ using an oxidant such as sodium nitrate and sintering at 700°C. Organic material must be fully ashed before fusing.

- Avoid contact with most metals, such as: Fe, Cr, Ni, Cu, Zn, Pb – particularly at elevated temperatures. If the metal particles are fine enough, they can be pre-oxidized as above.

- Do not carry out direct fusions with caustic alkalis, nitrates, cyanides or nitrides in Pt ware.

- Barium and lithium hydroxides react at red heat with platinum and fused alkali oxides and peroxides dissolve platinum.

- In general, reduce handling as much as possible. Ideally the Pt ware should only come in contact with tongs (titanium or Pt tipped steel tongs), balance pan and cradle used to hold the Pt ware. For example: preheated/conditioned inconel cradles for fusion work and teflon cradles for cleaning/washing. Never place Pt ware on bench tops.

Contact Premier Lab Supply about particular applications of platinum and its alloys.



GF-15
GF-20
GF-35
GF-47
GF-50
GF-65
GF-80
GF-100
GF-200
GF-9010

Borate Flux

The fusion technique utilizing borate fluxes is the most preferred method of preparing a powder sample. This method of sample preparation can be employed for a wide range of samples for analysis by x-ray fluorescence (XRF), atomic absorption (AA), inductively coupled plasma (ICP) as well as other analytical techniques



Borate Fluxes

Catalog No.	Weight	Product description
GF-15	2 Kilo	Fluxite 85% Li/Tetra 15% Lanthanum Oxide
GF-20	2 Kilo	Fluxite 20% Li/Tetra 80% Li/Meta
GF-35	2 Kilo	Fluxite 35.3% Li/Tetra 64.7% Li/Meta (Type 12.22)
GF-47	2 Kilo	Fluxite 47% Li/Tetra 36.7% Li/Carb 16.3% Lanthanum Oxide
GF-50	2 Kilo	Fluxite 50% Li/Tetra 50% Li/Meta
GF-65	2 Kilo	Fluxite 66% Li/Tetra 34% Li/Meta
GF-80	2 Kilo	Fluxite 80% Li/Tetra 20% Li/Meta
GF-100	2 Kilo	Fluxite 100% Li/Tetra
GF-200	2 Kilo	Fluxite 100% Li/Meta
GF-9010	1 Kilo	Fluxite 90% Li/Tetra 10% Li/Fluoride



GF-35-5B
GF-35-5I
GF-35-5SN
GF-50-5B
GF-50-5I
GF-65-5B
GF-65-5I
GF-100-5B
GF-100-5I

Borate Flux

Features at a Glance:

- Anhydrous, homogenous, pre-fused fluxes
- Easy to handle & weigh (ideal for automatic weighing systems)
- Defined geometry & low loss of ignition
- Dust-free
- 99.98% pure
- Non-hygroscopic

Borate Fluxes with Additives

Catalog No.	Weight	Product description
GF-35-5B	2 Kilo	Fluxite 34.75% Li/Tetra 64.75% Li/Meta .5% Li/Bromide
GF-35-5I	2 Kilo	Fluxite - 35.3% LithiumTetraborate/ 64.7% LithiumMetaborate /0 .5% Lithium Iodide
GF-35-5SN	2 Kilo	Fluxite - 64.7% LithiumMetaborate/ 35.3% LithiumTetraborate/ 5% Sodium Nitrate
GF-50-5B	2 Kilo	Fluxite 49.75% Li/Tetra 49.75% Li/Meta/0.5% Li/Bromide
GF-50-5I	2 Kilo	Fluxite - 50/50 with 0.5% of Li/Iodide
GF-65-5B	2 Kilo	Fluxite - 66.0 % of Li/Tetra, 34.0 % Li/Meta, 0.50% Lithium Bromide
GF-65-5I	2 Kilo	Fluxite - 66.0 % of Li/Tetra, 34.0 % Li/Meta with 0.5% of Li/Iodide
GF-100-5B	2 Kilo	Fluxite - Lithium Tetraborate with 0.5% of Li/Bromide
GF-100-5I	2 Kilo	Fluxite - Lithium Tetraborate with 0.5% of Li/Iodide



AI-1500
LB-015
LB-100
PI-215

Non Wetting Agents



Non Wetting Agents

Catalog No.	Weight	Product description
AI-1500	Contents: 1500 Tablets	Ammonium Iodide Tablets Average Weight 21.4mg
LB-015	15ml Solution	Lithium Bromide Solutions LiBr (25% <i>m/v</i>)
LB-100	1 Liter Bottle	Lithium Bromide (LiBr) Solution
PI-215	15ml Solution	Potassium Iodide; 15ml Solution Grade: Pure; KI (25% <i>m/v</i>)

VP-250
LN-1500
AN-2600
OX-1215
OX-2430

Oxidizing Agents



Oxidants

Catalog No.	Weight	Product description
VP-250	250g/ Bottle	Vanadium Pentoxide V2O5 Oxidizing Agent Solid Crystalline powder
LN-1500	1 Kilo	Oxidizing Agent; (LiNO ₃) Powder 99.9% High Purity Lithium Nitrate
AN-2600	500g/ Bottle	Oxidizing Agent, Ammonium Nitrate
OX-1215	125g/ Bottle	OXINITE Oxidizing Agent Mix
OX-2430	125g/ Bottle	OXIBOURNE Oxidizing Agent Mix



SC32A

Electric Fusion Furnaces

The electric bead-making fusion furnaces are specifically designed for the preparation of fused glass discs for XRF & solutions for AA and ICP. In addition, the furnaces may be used for sodium peroxide fusions.

XRF Bead-Making Furnace (Max 2 Stations)

Features at a Glance:

- Economically priced
- Low operating expense
- Perfect for educational institutions and research centers
- Precise temperature control (up to 1200°C)
- Reproducible sample preparation
- Fast heating (this furnace can be at 1050°C within 15 minutes)



Catalog No.	Power	Capacity	External H x W x D	Chamber H x W x D	Weight
SC32A	4.8Kw (240Vx1)	2 stations	400 x 580 x 470mm	115 x 180 x 160mm	26.5Kg

- Robust, economical, and compact furnace for the simplified and consistent production of fused samples for XRF and ICP analysis or for sodium peroxide fusions.
- Ideal for first time fusion users such as universities, research centers or as a back up to a production fusion machine.



SC142BMP

Electric Fusion Furnaces

The electric bead-making fusion furnaces are specifically designed for the preparation of fused glass discs for XRF & solutions for AA and ICP. In addition, the furnaces may be used for sodium peroxide fusions.

XRF Bead-Making Furnace ModuTemp (Max 6 Stations)

Features at a Glance:

- Electric heating with all solid state controls
- Exceptional reliability and full training & service support
- Reproducible sample preparation
- High productivity
- PLC control: up to 7 customizable programs
- Precise temperature control (up to 1250°C)
- Variable rate mixing & rocking action
- Variable speed fan cooling
- Over temperature protection
- Rugged & durable, low maintenance and repair costs
- Economically priced
- Operates up to six stations simultaneously.
- A self-contained, semi-automated furnace for the simplified and consistent production of fused samples for XRF, ICP analysis and sodium peroxide fusions.
- The samples are fused in batches of up to six at a time, generally finishing within ten minutes.
- The close-tolerance temperature control and accurately-timed functions ensure that each sample is processed in consistent and repeatable conditions.
- An audible alarm sounds whenever operator action is required.



Catalog No.	Power	Capacity	External H x W x D	Weight
SC142BMP	6.0Kw	6 stations	475 x 1100 x 500mm	95Kg (210lbs)



xrFUSE6

Electric Fusion Machines

xrFUSE6

Engineered to prepare permanent and homogenous fused beads under accurate reproducible conditions



Features at a Glance:

Zero Contamination

The ceramic cradle and holders ensure that the environment for creating beads has zero contamination in comparison with that typically found with Inconel based solutions.

Process Visibility

The glass viewing panel allows the customer to view the key elements of the fusion process in action. This is particularly important for method development.

Safe Operation

The external surfaces of the instrument have been modelled and developed with the latest IR technology to ensure all contact surfaces are safe to touch.

Simple User Interface

The User Interface has been designed based on customer requirements. It is simple to use and provides the flexibility to cope with the simplest operation on a repeatable basis or the most complex one off experiments



xrFUSE6

Electric Fusion Machines

xrFUSE6

A Diverse Range of Applications

The xrFuse 6 user interface is designed in such a way that it can meet the need for consistency of a production laboratory, while at the same time giving the analytical chemist the flexibility to modify parameters as required. Cold to cold operation means it is an ideal solution where the health and safety requirements of a production environment need to be strictly adhered to. If on the other hand, method development is the critical requirement, the instrument can be configured in a custom manner to meet specific experimental needs.

The absence of Inconel contamination makes the instrument an ideal candidate for samples requiring nickel analysis. For applications such as Mineral Sands where high accuracy and purity is required across a broad range of elements, the absence of contamination is a significant benefit.



Gas Fusion Machines

Phoenix fusion machines are used to prepare a wide range of samples for analysis by X-ray fluorescence, atomic absorption, inductively coupled plasma-atomic emission, and a variety of classical chemical techniques. The sample types include oxides, sulfides and silicates which comprise many of the ores and concentrates in the mining and metallurgy industry.

The Phoenix can be used for grade and sample quality control in:

- the glass and ceramics industry
- the steel industry, analyzing iron ores, blast furnace slags and even magnesites
- Bauxite/Alumina
- Base metal (Pb, Zn, Cu, Ni) for the analysis of sulfides concentrates, silicate slag's, mattes sinters etc
- the mineral sands industry
- the cement industry, analyzing sand, limestone, kiln feed, clinker, milled meal etc.
- University's and research organizations

One new feature that is now available in the Phoenix Model is an automatic ammonium iodide injector unit. This unit automatically injects precisely sized ammonium iodide tablets into the crucible.

The fusion concept lends itself ideally to an automatic mode. Great improvements in quality control and savings in manpower costs are achieved when a laboratory is automated.

Easy to operate, the Phoenix is capable of manufacturing beads of unparalleled quality.

For companies who need to produce tens of thousands of samples annually, the Phoenix is a key component of the fully automated laboratory where each function in the total process, from the selection of bulk samples to the transfer of the bead to XRF, is automated by robotics.

Productivity can be further enhanced by the provision of oxygen generation equipment to obviate the need for bottled oxygen and reduce running costs.

No matter what the task or the level of sample production sought, PREMIER can assist with a custom designed Phoenix to meet the most exacting specifications.

Phoenix fusion machines are currently represented in the following series:

- **XRF Fused Glass Disk - Phoenix VFD/M Series:** 1 to 6 fusions per cycle
- **XRF Fused Glass Disk - Phoenix VFD/R Series:** 2 to 3 fusions per cycle
- **XRF Fused Glass Disk - Phoenix VFD/S Series:** 1 fusion per cycle
- **XRF Fused Glass Disk - Phoenix VFD/MD Series:** 1 to 10 fusions per cycle
- **ICP Dissolutions Phoenix VFD/D Series:** 2-4 samples per cycle
- **ICP Dissolutions Phoenix VFD/I Series:** 1-12 samples per cycle
- **Lithium Borate Fusion for ICP-OES and XRF Analysis Phoenix - DM Series**

Additional options to Phoenix fusion machines:

- **Ammonium Iodide (NH₄I) Injector**
- **Oxygen injection**
- **Loss on Ignition**
- **Melt Loss**



Electric Fusion Machines Phoenix Range Specifications

Features	PX-VFD/M	PX-VFD/R	PX-VFD/S	PX-VFD/MD (Mouldable)	PX-VFD/I	PX-VFD/I	PX-VFD/D
Analysis Method	XRF	XRF	XRF	XRF	ICP	ICP	ICP
Number of beads produced simultaneously	3, 4 or 6	2 or 3	1	4 or 8	NA	NA	NA
Number of dissolutions produced simultaneously	OPT	NA	NA	NA	2, 3 or 4	6, 8 or 12	2 or 4
Variable speed swirling	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Separate mould timer	Yes	Yes	Yes	NA	NA	NA	NA
Can be used at high altitude without modification	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual burner selection	Yes	Yes	NA	Yes	Yes	Yes	Yes
Reset any time	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual burner manifolds	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjustable pour delay	Yes	Yes	Yes	NA	NA	Yes	Yes
Can heat heavy duty moulds	Yes	Yes	Yes	NA	NA	NA	NA
Automatic pouring into moulds	Yes	Yes	Yes	NA	NA	NA	NA
Two stage cooling	Yes	Yes	No	Yes	NA	NA	NA
Fully regulated cooling	Yes	Yes	Yes	Yes	NA	NA	NA
Autolocking crucible holders	Yes	Yes	Yes	NA	Yes	Yes	Yes
Heavy duty mould holders	Yes	Yes	Yes	Yes	NA	NA	NA
Moulds retracted & cooled over separate cooling jets	Yes	No	No	No	NA	NA	NA
Mould cooled in-situ above burners	No	Yes	No	Yes	NA	NA	NA
Recipe database	Yes	No	Yes	No	No	No	No
Pre- Melting	Yes	Yes	No	Yes	Yes	Yes	Yes
Separate Oxygen Injector	Optional	Optional	NA	Optional	Optional	Optional	Optional
Ammonium Iodide Injector	Optional	Optional	NA	Optional	Optional	Optional	Optional
Melt Loss	Optional	Optional	Optional	NA	NA	NA	NA
Loss on Ignition	Optional	Optional	Optional	NA	NA	NA	NA
Size-Height	310mm	250mm	200mm	310mm	250mm	310mm	310mm
Size-Width	880mm	620mm	350mm	880mm	620mm	880mm	880mm
Size-Depth	630mm	450mm	290mm	630mm	450mm	630mm	630mm



PX-M-3000
PX-M-4000
PX-M-6000

Gas Fusion Machines

Phoenix VFD – Fused Glass Disk VFD/M Series: 3 to 6 fusions per cycle

The Phoenix VFD series fusion machines are the full size models. They are specifically designed to speedily prepare permanent and homogeneous fused beads under accurately reproducible conditions. The process involves dissolving samples and mixing them with a borate flux at temperatures ranging from 600 to 1250 °C. The fused borate flux and sample substance mixture is automatically poured into pre-heated moulds. The moulds are then retracted over separate cooling jets for precise control of cooling.

The PHOENIX VFD features at a glance:

- Exceptional reliability and full factory service support
- Automated & reproducible sample preparation
- High speed bead/solution production
- High productivity
- Up to 10 customized programs
- Individual burners and control functions for crucible and mould
- Precise temperature regulation of each individual burner (from 600 to 1600 °C)
- Superior homogenization
- Rugged & durable, low maintenance and repair costs

The new Phoenix VFD series fusion machine includes a dynamic touch screen display that monitors every phase of the fusion process. Fusion recipes, temperature, cooling and other settings can be stored with one simple touch of the screen.

Specifications:

- Power: 110 or 240 VAC 50/60Hz, 720 Watts
- Gas: Propane (LPG) 15 to 100kPa (2 to 14.5psi)
- Natural 8 to kPa (1.2 to 1.8psi)
- Air Supply: 500kPa minimum (72 psi)
- Oxygen 500 kPa minimum (72 psi)
- Dimensions: H 310mm (12in), W 880mm (34.5in), D 630mm (24.8 in)



PX-R-2000
PX-R-3000

Gas Fusion Machines

Phoenix VFD/R - Fused Glass Disk VFD/R Series: 2 to 3 fusions per cycle



The R series is smaller than the VFD series and is designed for lower sample output. The Phoenix R series also uses a modular system of construction so that analyses can grow from a single sample model up to a 3-position machine.

Catalog No.	Description	No. of Burners	No. of Glass Disks/ Cycle	Options
PXR-2000	Phoenix R-2000	4	2	Pre-melt
PXR-3000	Phoenix R-3000	6	3	Pre-melt, Oxygen injection

PX-S-1000

Phoenix VFD/S - Fused Glass Disk VFD/S Series: 1 fusion per cycle

The Phoenix VFD S series fusion machine has all the capabilities of the standard production machine including clear and precise time setting by touch screen button control. There are no special programming techniques required. Simple instructions prompt users as required. Each program can be readily loaded with the touch of a button. The S model is ideal for commercial and industrial labs including research and educational institutions.

PHOENIX VFD S model features at a glance:

- Economically priced
- Ideal for an intro-fusion machine or as back up
- Low cost operating expense
- Perfect for educational institutions and research centers



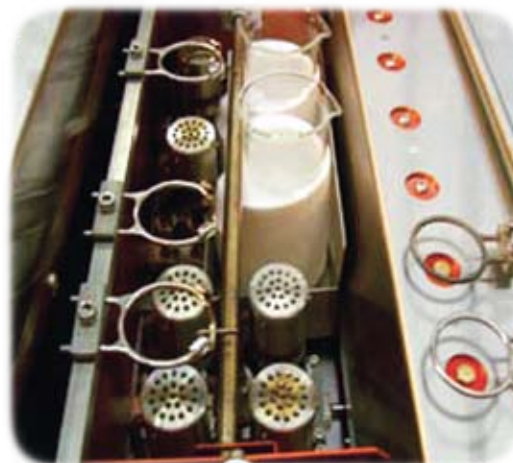
PX-DM 1010
PX-DM-2020

Gas Fusion Machines

Phoenix - DM Series for Lithium Borate Fusion for ICP-OES and XRF Analysis

The DM series is a full size machine. The Phoenix DM uses a modular system of construction so that up to two ICP-OES dissolutions or two XRF glass disk preparations can be done simultaneously. The Phoenix's rugged construction allows it to meet the high demands of a modern laboratory.

Description	No. of Burners	No. of Samples Produced	Options
Phoenix 1010 VDM	2	2 x ICP-OES Dissolution/ 1 x Beads	Oxygen Injection
Phoenix 2020 VDM	4	2 x ICP-OES Dissolution/ 2 x Beads	Pre-Melt



Features at a Glance:

- Individual burner selection
- Variable speed swirl action
- Fully regulated air cooling (2-stage)
- Reset at any time
- Can be used at high altitudes without modification
- Separate mould heating & timing
- Can heat moulds up to 180°C
- Auto-lock crucible holders
- Adjustable pour & mould delay
- Individual burner manifolds

Operation: The Phoenix fusion machine is capable of sintering or fusing at temperatures varying from 300°C to 1600°C. Samples are dissolved and mixed at typical fusion temperature of 1050°C. This is done over oxygen-enriched flames using specially designed burners. The sample is automatically poured into beakers or moulds. The beakers are then removed and heated/swirled over a separate hotplate. The glass discs are analyzed directly by XRF.



PX-D-2000
PX-D-4000

Gas Fusion Machines

Phoenix ICP Dissolutions PX-VFD/D Series: 2-4 samples per cycle

The D series is a full size machine. The Phoenix D uses a modular system of construction so that up to four dissolutions can be done simultaneously. The Phoenix is of rugged construction and designed to stand up to the high demands of a modern laboratory.

Operation: Samples are dissolved and mixed in platinum/gold crucibles at temperatures ranging from 300 to 1600 degrees Celsius. This is done over oxygen-enriched flames using specially designed burners. The sample is automatically poured into beakers. The beakers are then removed and heated/swirled over a separate hotplate.



PX-I-2000
PX-I-4000
PX-I-6000
PX-I-8000
PX-I-10000
PX-I-12000

Phoenix ICP Dissolutions PX-VFD/I Series: 1-12 samples per cycle



Operation: Samples are dissolved and mixed in platinum/gold crucibles at temperatures ranging from 300 to 1600 degrees Celsius. The crucibles and solidified sample are removed from the machine, placed into separate beaker and immersed in the acid solution.

The I series is a full size machine. The Phoenix I uses a modular system of construction so that up to twelve dissolutions can be done simultaneously. The Phoenix is of rugged construction and designed to stand up to the high demands of a modern laboratory.

Description	No. of Burners	No. of Dissolutions Each Cycle	Options
PX I - 2000	2	2	Oxygen Injection
PX I - 4000	4	4	-
PX I - 6000	6	6	-
PX I - 8000	8	8	-
PX I -10000	10	10	-
PX I - 12000	12	12	Oxygen Injection



**PX-MD-2000
PX-MD-4000
PX-MD-6000
PX-MD-8000
PX-MD-10000**

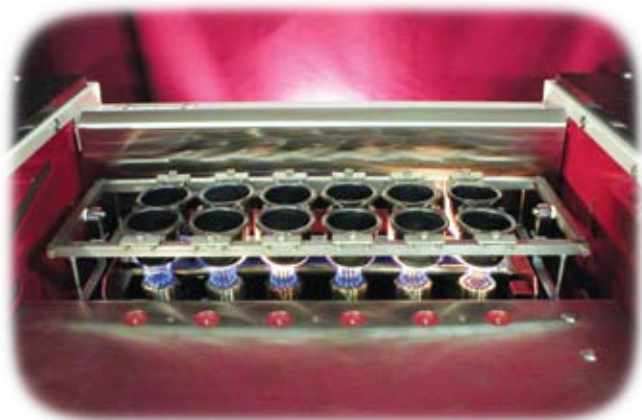
Gas Fusion Machines

Phoenix MD (Mouldable) Fused Glass Disk

Product Description

The MD series is a full size machine designed for high sample output and can produce up to 10 fusions simultaneously. The mouldable machine uses a mould that incorporates a crucible shape so that mixing and molding are done in the one vessel (moldable).

Samples are dissolved and mixed into a lithium borate flux at temperatures ranging from 300 to 1250°C (typical fusion temperature is 1050°C). This is done over oxygen enriched flames using specially designed burners.



Catalog No.	No. of Burners	No. of Glass Disks per Cycle	Options
PX-MD - 2000	2	2	-
PX-MD - 4000	4	4	-
PX-MD-6000	6	6	-
PX-MD-8000	8	8	-
PX-MD-10000	10	10	Oxygen Injection

Operation

The mixing and moulding are done in the mouldable using the well known swirl (planetary) action. When mixing is complete the molten material is rocked to release any bubbles, then leveled and cooled in the mouldable. The glass disk is then removed using a suction cup or similar device.



1700-120-205
1700-204-310
1700-306-415
1700-408-520
1700-510-625
1700-612-730
1700-714-835

*Suitable for crucible, mouldable and mould platinum labware. Supplied in the raw inconel material state, the racks require a simple heat treatment step prior to usage: heating the rack to 1100°C in air for 90 minutes. This process oxidizes the surface to prolong its life cycle. A range of sizes from an 8-position crucible rack to a 3-position mouldable rack is available to suit your lab ware specifications.

1725-112-508
1725-214-610
1725-316-712
1725-418-814
1725-520-916



1735-314-810
1735-416-912
1735-518-114
1745-620-216



Fusion Accessories

Fusion Labware Cleaning & Organizing

Catalog No.	Type	Description
1700-102-205	Teflon Mould Holders for 12 pcs	Protects the casting surface
1700-204-310	Teflon Crucible Holders for 5 pcs	T-handle design minimizes damage when cleaning
1700-306-415	Furnace Crucible rack	A range of sizes *
1700-408-520	Furnace Mould Rack	A range of sizes *
1700-510-625	Low Adhesive Type Labels	Dia. 32, 35 & 40mm, 240/box, For Pellets and Fusion Beads
1700-612-730	Handling Tool for Glass Beads & Pellets	2 pcs/set
1700-714-835	Plastic Tweezers	Each

Platinum Tipped Tongs

Catalog No.	Type	Description
1725-112-508	Stainless Steel Pt Tip Tongs (Light Duty)	Platinum Tip (5g), length 250 or 300 mm
1725-214-610	Stainless Steel Pt Tip Tongs (Heavy Duty)	Platinum Tip (10g), length 250 or 300 mm
1725-316-712	Stainless Steel Pt Tip Tongs (Protection Shield)	Platinum Tip (12g), length 420 or 620 mm
1725-418-814	Titanium Tongs	Length 250 or 300 mm
1725-520-916	Titanium Tongs (Heavy Duty)	Adjustable Hinge, Length 400mm (16.0")

Reshapers

Catalog No.	Type	Description
1735-314-810	Crucible Reshaper, Steel	Custom size
1735-416-912	Mould Reshaper, Steel	Custom size
1735-518-114	Crucible Reshaper, Plastic	Custom size
1745-620-216	Polishing Lathe for Pt, 115 VAC/60hz. A complete Polishing Kit	Includes: emery paper, polishing felt, crucible/mold holders, polishing oil, diamond paste



Fusion Services

FUSION SERVICE OVERVIEW

PREMIER's experienced and knowledgeable service engineers are dedicated to customer support. They are trained and certified in accordance with OEM standard to ensure they will professionally commission your newly purchased fusion machine, provide training and assist you with your service requirements. A partnership with Premier means total customer support from a single source.

We provide:

- Problem solving and analysis via telephone
- Prompt repair services
- Express delivery of spare parts
- Machine start-up and training
- Maintenance programs

APPLICATIONS SUPPORT

Even before considering a certain type of equipment we offer application assistance and support through utilizing your materials in our application laboratory to help you to determine the sample preparation method that suits you best.

- Development of methods
- Improvement of your sample preparation with new chemicals or equipment.
- On-site training

SPARES, CONSUMABLES AND LOANERS

• Our well stocked parts and accessories inventory ensures prompt shipment of items minimizing machine downtime.

• In addition, we offer loan of a replacement machine in case of a long intermission period.

• We also maintain a large inventory of borate fluxes and other chemicals utilized in fusion.

INSTALLATION, TRAINING & VALIDATION

We take charge of the full installation to ensure that your sample preparation equipment is set up to manufacturer's specifications, and configured to your user-specific requirements. During installation we also take the time to teach your staff all the relevant aspects of instrument operation, safety procedures, and day-to-day equipment maintenance. Finally we finish the installation by the validation of method(s) using your samples, and complete by carrying out repeatability tests.

PREVENTIVE MAINTENANCE & REPAIR

PREMIER offers three maintenance plans to ensure your equipment stays in prime operating condition. A brief description of the available on site service plans:

- Service Agreement: Type A: Scheduled Preventive Maintenance + hot line + e-mail assistance
- Service Agreement: Type B: Type A + Emergency visit
- Service Agreement: Type C: Type A + Unlimited Emergency visits + Loan of a replacement machine in case of long downtime period.



17C-TKX147166
17C-TKX4484

Features at a Glance:

- Ideal for cleaning liquids, glass, metal, plastic and stainless steel
- Delicate wipes for universal laboratory light cleaning tasks
- Packaged in antistatic dispenser
- Economically priced



17C-TWX30
17C-TWX40
17C-TWX40J
17C-TWX60
17C-TWX80

Features at a Glance:

- Fast absorbent wipes for heavy-duty cleaning tasks
- Vast selection and variety to choose from
- Economically priced
- Solvent-resistant



Industrial Wipes

Kimwipes® Delicate Task Wipers

® Kimwipes is a registered trade mark of Kimberly Clark Professional

These delicate wipes are perfect for light cleaning tasks in the laboratory. They quickly and easily wipe up liquid & dust and are packaged in a portable antistatic dispenser that controls usage and reduces lint and electrostatic discharge. Dry towel wipes can be used in the laboratory and on glass, metal, plastic and stainless steel.

Catalog No.	Dimensions	Packaging
17C-TKX147166	14.7" x 16.6"	90/box
17C-TKX4484	4.4" x 8.4"	280/box

Wypall® Wipers

®Wypall is a registered trade mark of Kimberly Clark Professional

Catalog No.	Type	Dimensions	Packaging
17C-TWX30	Economizer	12.4" x 13.3"	950 sheets/roll
17C-TWX40	White	12.5" x 14.4"	56/box
17C-TWX40J	Jumbo Roll	12.5" x 13.4"	750 sheets/roll
17C-TWX60	Reinforced	9.1" x 16.8"	126/box
17C-TWX80	Red	12.5" x 13.4"	475/roll



Price \$10



 **PREMIER**
LAB SUPPLY

XRF Sample Preparation Specialists

WWW.premierlabsupply.com. Ph. 772-873-1700, F. 772-873-1800